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MANUAL OF OPERATIONS

PRIMARY HEALTH CENTRES

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FOREWORD

The Primary Health Centre is the basis from which all specific health operations are commenced and taken to the people. It is the nearest approach to a realistic, economic and ideal set-up for ensuring the future health of the people. It reduces the need for hospital beds, changes the pattern of hospital admissions, curtails expenditure on treatment of the sick and provides the foundation for an edifice of preventive and promotive health that can be built by the exponents of Public Health who take their learning into the very homes of the people where health practice must be taught and learnt.

I am glad that Dr. Sharma has brought out the 'Manual of Operations–Primary Health Centres' at this juncture. She has dealt with the subject in a masterly way and has lucidly brought out how the various health services are well knit in the Primary Health Centre, which is an integral part of the Community Development. The Manual contains not only basic information about rural services but also provides guidance as to how the Centre and the services should be maintained to give the people the maximum benefit. It is an excellent guide and I commend the book for study not only by lay persons but also the professional workers.

(Sd.) JOTHI VENCATACHELLUM,
Health Minister, Madras.

ACKNOWLEDGEMENT

With the publication of the "Manual of Operations-Primary Health Centres" I am confident, that a long felt need would be met. The Manual is to provide an useful reference Hand book to all the staff of the Primary Health Centre, and also help the District Health Officers and Medical Officers of Primary Health Centres to plan the various Public Health Programmes in the Block, using the Manual as a guide.

I am grateful to all the Officers who have given their time and energy and valuable suggestions in the preparation of this manual. Prominent among them are Dr V. Hariharan, Assistant Director of Public Health (I), Dr K. S. Ramakrishnan, Assistant Director of Public Health (Smallpox Eradication Programme), Dr S. Subbiah, Assistant Director of Public Health (Health Education Bureau), Dr P. Lakshmi, State Family Planning Officer, Madras, Sri K. Pisharoti, Principal, Sanitation Faculty, Rural Institute, Gandhigram, Dr K. V. Ranganathan, Director, Institute of Rural Health and Family Planning, Gandhigram, Sri R. Srinivasan, Research Officer, Institute of Rural Health and Family Planning, Gandhigram, Dr Gokhale, Special Supervisory Unit Officer, National Malaria Eradication Programme, Madurai, and Dr Henry Moses, Professor of Social and Preventive Medicine, Madras Medical College.

This manual represents the combined thinking of these Officers, who have brought to bear on the volume of their rich experience in the field and in the Office.

(Sd.) H. M. SHARMA,
Director of Public Health, Madras.

MADRAS-6,
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MANUAL OF OPERATIONS

PRIMARY HEALTH CENTRES

CHAPTER I

INTRODUCTION

The practice of medicine is one of the oldest professions dating back perhaps to the earliest period of man's life on earth. Yet modern medicine, as we know it and benefit from it, is hardly more than a century old. Attention was restricted in the practice of medicine to the individual sick. The Health of the Community was hardly considered at all till about 100 years back. Still more recent in origin, is the Public Health movement which is but half a century old.

Definitions.—Earlier definitions restricted Public Health to sanitary measures undertaken against dangers to health which, when present in one individual could adversely affect others. Improvement in environmental sanitation was then added on. Still later communicability of diseases from one person to another was a criteria followed in deciding whether a problem fell within the Public Health jurisdiction or sphere of interest. The grand discoveries in the field of Bacteriology of the late 19th and early 20th centuries and in immunisation procedures led to the concept of prevention of disease in the individual. Public Health then came to be regarded as an integration of sanitary sciences and the medical sciences. It is only, relatively recently, that *Medicine* and indeed public health have become widely recognized as social sciences. One of the most comprehensive definitions of public health is that of Prof. *Winslow.*—

"Public Health is the *Science and art* of—

(1) preventing disease,
(2) prolonging life, and
(3) promoting health and efficiency, through organized community effort for—

(*a*) the sanitation of environment.
(*b*) the control of communicable infections.
(*c*) the education of the individual in personal hygiene.
(*d*) the organisation of medical and nursing services for the early and preventive treatment of disease, and
(*e*) the development of social machinery to ensure everyone the standard of living adequate for the maintenance of health, so organizing these benefits as to enable every citizen to realize his birth right of health and longevity."

This definition is comprehensive enough to include almost everything in the fields of social service and reform. There is another definition adopted by the World Health Organization and included in its constitution—

"*Health* is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity".

From the above definitions it will be clear that there has been over these years a gradual widening of the horizons of public health in conformity with the advances in medical and scientific knowledge and in keeping with social and economic progress all over the world.

A distinction has been sought to be made between public health and private practice of medicine not so long ago. With the public Health Department concerning itself mainly with environmental sanitation, enforcement of sanitary laws to prevent the spread of communicable diseases such as isolation and quarantine and the private practice of medicine being restricted to treating of the sick individuals, this might have been valid. Now the line of demarcation is much less sharp and is fading. The examples of tuberculosis, leprosy, venereal disease—the most important public health problems facing the country now would suffice to bring out the merging of interests of public health and curative medicine. Prevention and cure are increasingly looked upon now-a-days as complementary. Thus both private practice of medicine and public health may then be considered as divisions of *Preventive Medicine*, public health being the part that requires organized community effort or action. This latter is the major field of the *Medical Officer of Health*, but the practitioner of medicine also plays his role in this field as a member of a large team of health workers and agencies.

It is accepted that the best job the public health personnel can do is to promote health and prevent sickness and give practical support to curative services by organizing community effort and mobilizing its resources. The scope of public health is daily increasing. It includes man in his total environment' from infancy to old age.

The Medical Officer of Health (M.O.H.).—a distinct contribution of Britain to Public Health advancement in the world—is considered to be the pivot round which the health services are organised for the benefit of the community. He is head of the team of front line workers namely, *health visitor, public health nurses, midwives, public health inspectors and doctors.*

To understand public health and its needs, a knowledge of the broad picture of health and disease in the country is necessary. Generally speaking infectious diseases like smallpox, cholera typhoid, plague, filariasis, malaria, tuberculosis etc., and nutritional

disorders (protein and vitamin deficiencies) are widespread in India and other parts of Asia. Maternal and infant deaths are also high in this country. This list, though not comprehensive, at least helps us to understand the problems that public health has to face in this country. It is against this back ground that the "Health Survey and Development Committee" (Bhore Committee) appointed by the Government of India in 1943 made certain recommendations for the provision of public health services and the improvement of public health in this country. One of the main recommendations concerns the establishment of a net-work of Primary Health Centres throughout the country. At the time when the Bhore Committee published its report, the picture of health conditions in this country could be summarized as follows :—

Death rate 22·4 per thousand.

Infant mortality rate 162 per thousand live-births.

Expectation of life at birth 26·91 for males and 26·56 for females.

Maternal mortality rate 20 per thousand live-births.

Nearly half of the total number of deaths were among children under 10 years of age and in this age group one half of the mortality took place within the first year of life.

Endemic diseases like leprosy, filariasis, guineaworm, hookworm, etc., though not contributing to a large extent to the mortality figures, cause considerable morbidity. The Bhore Committee found that the low state of public health as reflected in the high mortality and morbidity (particularly among mothers and children) was preventible and mainly due to the absence of environmental hygiene, adequate nutrition, adequate preventive and curative health services and intelligent co-operation from the people themselves. So far as health administration was concerned, the Committee found a complete absence of the concept of simultaneous application of preventive and remedial measures. One of the most important recommedations was that as much medical relief and preventive health care as possible should be provided to the vast rural population of the country. Health services should be placed as close as possible to the people in order to ensure the maximum benefit to the communities to be served. The need for integration of curative and preventive services, especially at the peripheral level has therefore been recognised in recent times to be of vital importance to make progress in public health. A further concept of recent times is the increasing use of para medical and auxiliary health personnel under the direction and control of higher grade professional personnel (i.e.), Medical Officers. These auxiliary personnel can relieve the Medical Officer of much of the routine work in the field of public health

so that he can function more effectively in his professional field of interest, thus raising the quality of the services in a Primary Health Centre.

The educational aspects of everyone of the public health programmes in a Primary Health Centre have been dealt as a part of the programmes themselves in the succeeding pages since it is felt that health education is an integral part of any public health programme and as such should not be dealt with as separate entity. Also it will serve to emphasise that every public health worker is expected to use health eduction as a tool to improve the programme results and not expect somebody else from without to do it. Consultation on health education techniques will be available to the Primary Health Centre staff from the State Health Education Bureau attached to the Directorate of Public Health.

CHAPTER II

SCOPE AND OBJECTIVES OF THE PRIMARY HEALTH CENTRE

The Primary Health Centre is a multipurpose unit established at the peripheral level to render preventive and curative medical services to the community and to build up in course of time, positive health of the community. With the responsibilities in the field of health devolving more and more upon the local authorities (Panchayats and Panchayat Union Councils) in the times to come, the Primary Health Centre will have an increasing role to play as a technical adviser to those bodies and to act as their channel of such service to the people. The Primary Health Centres will be looked upon as Public Health Institutions to study public health problems in rural areas in some detail to seek solutions for the same and to evaluate the programmes under way.

The State Governments, in co-operation with the Government of India, have launched control (or eradication) programmes for certain diseases of great public health importance, like Malaria, Tuberculosis, Smallpox, Yaws, etc., with specially trained staff. Once these programmes reach the stage of stabilization or maintenance, plans for decentralization of such schemes and merging them with the existing health services of the State will naturally have to be fulfilled. The Primary Health Centres will have to take over such responsibilities in future. Such a step not only helps in

effecting considerable economy in expenditure, but also in increasing the usefulness of the units to the community. The Primary Health Centre will co-ordinate its activities with that of the specialised services—Water-supply, drainage, etc.,—and work in close collaboration with such agencies at the Block level. The specialized services in the field of environmental sanitation will also provide technical guidance and support to the Primary Health Unit staff in improving domestic sanitation. Such considerations will apply equally to other special schemes like, Mass B.C.G. Campaign, Leprosy, Malaria, etc. These are dealt with in detail in the appropriate chapters that follow. Lastly, the Primary Health Unit should work in very close collaboration with the Taluk Headquarters and District Headquarters hospitals so that a satisfactory system of referral of patients from Primary Health Centre to these institutions for higher specialized medical care can be evolved. The services which radiate from the Primary Health Centre and the sub-centres are—

(i) Medical care.

(ii) Improvement of Vital Statistics.

(iii) Maternal and Child Health Services, including training of Dais.

(iv) Family Planning.

(v) School Health Services.

(vi) Control of Communicable diseases.

(vii) Environmental Sanitation.

(viii) Health Education.

CHAPTER III

MEDICAL CARE

Medical care is one of the important basic functions of a Primary Health Centre. Medical care should not be considered as an end in itself but as a means of extending preventive services to the community. The total volume of urgent medical care may be so large in the area that * " Even a perfect and complete medical

* World Health Organisation, Technical Report Series, 176 (1959).

The following time-table of work for the Medical Officer and other staff is suggested as a model for the Primary Health Centre :—

	Main Centre (1) *fore-noon.*	*Travel.* (2)	*Sub-Centre* (3) *after-noon.*
Monday—			
7 to 10-30 a.m.	Out-patient	1-30 to 3 p.m.	3 to 4 p.m.—Out patient I, sub-centre I.
10-30 a.m. to 12 noon.	Visit to Intensive area for Public Health work.		4 to 6 p.m. Ante-Natal Clinic and Public Health work—Intensive area.
Tuesday—			
7 to 10-30 a.m.	Out-patient	Do.	3 to 6 p.m.—Public Health work— Non-Intensive area
10-30 a.m. to 12 noon.	Vasectomy operations.		
Wednesday—			
7 to 10-30 a.m.	Out-patient	Do.	3 to 4 p.m.—Out patient, Sub-Centre II.
10-30 a.m. to 12 noon.	School Health inspection		4 to 6 p.m. Ante-Natal. clinic and Public Health work—Intensive area.
Thursday—			
7 to 10-30 a.m.	Out-patient	Do.	3 to 6 p.m.—Supervision of work of Health Inspector, Health visitor, etc., in Intensive area.
10-30 a.m. to 12 noon.	Ante-Natal Clinic and Well-baby Clinic, Public Health work in Intensive area.		
Friday—			
7 to 10-30 a.m.	Out-patient	Do.	3 to 4 p.m.—Out Patient, Sub-centre III.
10-30 a.m. to 12 noon.	School health work and clinic.		4 to 6 p.m. Ante-Natal. Clinic and Public Health work Intensive area.
Saturday—			
7 to 10-30 a.m.	Out- patient	Do.	3 to 6 p.m.—School Health Clinic in the Intensive Public Health area.
10-30 a.m. to 12 noon.	Special Clinics—Tuberculosis, Leprosy, etc.		
Sunday—			
7 to 10-30 a.m.	Out-patient.		Day off.

The Medical Officer should have the concurrence of the District Health Officer for any adjustments in the working hours of the Primary Health Centre for considerations of local conditions, habits of people and their occupation, seasonal conditions, etc. But the content of work and the total time spent on such work must be arranged as indicated in the time-table. Though it may not be possible for the Medical Officer to keep a record for each new case that attends the clinic in view of the number involved, and the lack of clerical staff, it is suggested that at'east for important communicable diseases like Leprosy, Tuberculosis, Venereal diseases, Typhoid, Dysentery. etc., a separate case register should be made out, which contains details about the family contacts of these cases and the Public Health measures adopted to prevent the spread of the diseases (specimen card enclosed). Also a separate register must be maintained for all the important communicable diseases occurring in the area.

In-patient care.—In view of the fact that bed provision in a Primary Health Centre has been kept to a minimum in order to free the doctor for public health and preventive services, there should be some firm arrangements with Taluk Headquarters and District Headquarters hospitals for the referral of cases which need a higher type of medical care. The practice hitherto followed in such contingencies may be continued even now. This will apply to maternity cases which develop complications or which in the opinion of the Medical Officer requires to be referred to a higher Medical Centre. A proper and close liason between the Primary Health Centre and Referral hospital in the districts must be developed. It should also be ensured that the Referral hospitals send back to the Primary Health Centre a report about the attention or treatment given to the patient and any advice regarding follow-up. Such a step will ensure proper follow-up of the case by the Primary Health Centre staff even after discharge from a Referral hospital.

Laboratory services.—Some of the Primary Health Centres are provided with microscope and facilities for staining of specimens. In those centres where, such facilities are not provided patients are being referred to institutions many miles away even for the simplest laboratory test. It is therefore desirable to have a laboratory side room at the Primary Health Centre for simple procedures. There is no doubt that locally available laboratory facilities would enhance both the quality of treatment and also the Medical Officer's interest in the Medical Care Programme. Such units will in course of time have some importance from an epidemiological point of view also. The Compounder could be trained in simple laboratory techniques either by the Medical Officer or at the District Headquarters Hospital for a period of two weeks. Laboratory tests

that could be undertaken at the Primary Health Centre level are as follows :—

(*a*) Sputum for AFB.

(*b*) Urine examination for albumin, sugar, etc.

(*c*) Stools for ova, cysts, and Amoeba.

(*d*) Blood smear examination for malaria parasite.

(*e*) Haemoglobin estimation.

Health Education and Medical Care.—Most of the available time of the medical officer is now spent on medical care in a Primary Health Centre lasting nearly 3 to 4 hours a day. This period could be availed of usefully by the medical officer and his staff for health education of patients. Medical care should not be looked upon as an end in itself but a leading to prevention for which health education is essential. If the medical officer and his staff can view medical care in this light, then there is a broadening of the scope of the services that is rendered in a Primary Health Centre with all the limitations of staff equipment, etc. The promotional aspects of health will then slowly gain in importance over the narrow demands of curative medicine. A simple study to analyse the diseases for which people in the area seek the aid of the Primary Health Centre, monthly and seasonwise, can be made and this will form a useful starting point to plan preventive and educational programmes. Outpatient registers may be utilized for this purpose. The findings of the study of the common disease conditions may be reported to and discussed with the staff of the Primary Health Centre at the monthly staff meetings. This information may be shared with the members of the Primary Health Centre Advisory Committee which has been recently constituted in the blocks at the quarterly meetings. This is bound to improve community participation in the activities, of the Primary Health Centre. Each category of staff at the Primary Health Centre—Medical Officer, Health Inspector, Health Visitor, Maternity Assistant, Pharmacist, etc.—may give appropriate information on prevention as part of their services to patients. But the primary motivation of the patient in regard to prevention has to be done by the medical officer and later followed up by other staff, before the patient leaves the Primary Health Centre. This will be both helpful and meaningful to the patients in taking personal responsibility for prevention.

CHAPTER IV

VITAL STATISTICS PROGRAMME IN A PRIMARY HEALTH CENTRE

1. *Introduction.*—Vital Statistics, especially of births, deaths and infant mortality, are basic indicators of community health. They form the yardstick in the measurement of community health. A knowledge of the absolute number of vital events occurring in a community is necessary not only for estimating the requirements of health personnel and equipment for rendering preventive and curative services, but also for assessing the progress in the health of the community in the course of years and for evaluating the results of service programmes. The Planning and evaluation of Public Health programmes like control of communicable diseases and family planning are very much dependent on the extent of completeness and accuracy of registration of births and deaths in that area. Though valid data on the vital rates of a community during any period of time can be had from the results of statistically planned surveys, a continuous study of the vital events taking place in an area and the trends, if any, on the vital rates during the course of years is possible only if there is complete and accurate registration of all the births and deaths taking place in the community. But unfortunately, it has been found from various studies conducted in different parts of India that the registration of births and deaths suffers from lack of accuracy and completeness. The improvement of both the quantity and quality of registration of births and deaths forms an important function of the Primary Health Centre.

2. *Importance of Registration of births and deaths.*—The importance of complete and accurate registration of births and deaths is obvious, not only from the point of view of the individual about whom the vital events are recorded but also from the nation's point of view. An accurate set of vital statistics is an asset for sound planning for the nation's progress. The major purposes that can be served by a proper recording of births and deaths are as follows :—

(*a*) In many areas the entry in the birth and death registers and the particulars recorded therein, are the only proof of the date, place of birth, nationality of the child. For Madras State, this has been clearly specified in section 17 of the Madras Birth and Death Registration Act of 1899. Failure to record the birth of a child might cause considerable difficulties in the child's future life, especially when being admitted into school or later when entering a profession, in which circumstances, proof of age and nationality are invariably insisted upon ;

(*b*) A fairly accurate assessment of the cause of death will lead to the prevention of many epidemics at the onset and will enable sound planning of the health services in the area ;

(*c*) For comparative study of the health conditions in different areas within the District and outside it ; and

(*d*) To cast mortality tables, which, at a glance will give a good picture of the conditions in an area and exceedingly useful in Insurance.

3. *Present system of registration of births and deaths in Madras State.*—The village headman of the biggest revenue village included in the villages of a Panchayat is the Registrar of Births and Deaths in his area. By the Birth and Death Registration Act of 1899, the registration of births and deaths is compulsory and any birth is to be reported to the village headman within 14 days and any death, within 4 days. The details of births and deaths are to be entered by the village headman for each year in separate registers which are supplied to them annually by the Tahsildar of the taluk. The importance of these registers can very well be understood from Section 17 of the Act, which claims that any extract of the Birth and Death Registers will be admitted as proof of the entries. The village headmen are also expected to keep themselves informed of the births and deaths occurring in their villages and register them accordingly. Revenue Officials of the rank of Tahsildar and Sub-Magistrate and any Public Health Official not below the rank of Health Assistant are to check the accuracy and completeness of the registration. The Revenue Inspector is to check the internal accuracy and consistency of entries in the Birth and Death Registers.

Extracts of births and deaths from the registers, with deaths classified in different age groups and according to diseases are sent for every month by each registrar to the Tahsildar of the Taluk on or before the third day of the succeeding month. The entries in the village Birth and Death Registers are checked when the Health Inspector or the Health Assistant visit the villages. Any unregistered births or deaths detected within one year are registered first and then reported to the Tahsildar for sanction of prosecution of the defaulters. Births and deaths detected after one year of occurrence shall be registered only on the orders of the Magistrate.

The returns are sent by the Tahsildar by the 8th of the month to the Director of Public Health, Madras, who consolidates the figures in his office. After consolidation they are returned to the Health Inspector through the District Health Officer.

4. *Deficiencies noticed in the present system of registration.*—The registration of births and deaths at present had been found to be deficient both in quantity as well as in quality. The expected number of births and deaths per thousand population in our State are at present around 40 and 18 respectively. However, actual registered rates stand around 28 and 13 per thousand for births and deaths respectively indicating a deficiency of 30 and 28 per cent in births and deaths. The main causes for this extent of under registration, as obtained from various studies in the State have been found to be—

(i) The Registrars of Births and Deaths are not fully aware of the importance of registration and are most times not available to the public when they want to register a birth or death.

(ii) There is much ignorance on the part of the public as to when and how they should convey the information of birth and death occurring in their familes.

(iii) The informants, expected to assist the Registrars in conveying the information of vital events are not being utilised to the extent possible.

(iv) In many instances the births and deaths occurring in hospitals and in Maternity Centres are not registered.

(v) The areas covered by the different ragistrars, i.e., village headman are so variable in population and in size that at times people find it inconvenient to walk long distances to register the events.

(vi) The quality of registration, viz., the accuracy of the particulars of the events recorded like age of the mother, parity, etc., in the case of births and cause of death, age at death, etc,, in the case of death are not correctly assessed by the Registrars at the time of registration, partly due to ignorance and partly due to lack of time.

It has become a routine for the Registrars to assign 'deaths' under 'Other fevers' or 'All other causes' excepting when the informant himself gives out the cause correctly.

5. *Methods that are to be adopted by the Primary Health Centre staff for the improvement of vital statistics registration in a community Development Block—Intensiv area.*—In the 'intensive' area covering a population of roughly 25,000 the following items of work with regard to the improvement of vital statistics registration should be undertaken by the staff of Primary Health Centre. Even in the intensive area the Primary Health Centre staff could concentrate initially on two or three villages around main Centre and around each sub-centre and go on to other villages later—

(i) The Health Inspector should record in the "Birth and Death Postings Registers" an accurate and uptodate information about the births and deaths registered in these villages monthly, for every hamlet separately.

(ii) The Health Inspector should arrange a quarterly meeting with the birth and death registrars of the intensive area; for organising such meetings, he should contact the Tahsildar of the taluk through his Medical Officer and arrange the meeting in consultation with him. He should utilise this meeting to impress on the registrars the importance of birth and death registration, the deficiencies found in the registers of the same year, and for the improvement of registration. Revenue Divisional Officer may be requested during Jamabandi to invite the Medical Officer and the Health Inspector to talk on Public Health matters particulary Vital Statistics registration and arrear returns.

(iii) The Maternity Assistants serving in the intensive area should be utilised as informants of vital events. Printed booklets containing perforated slips separately for births and deaths may be used for this purpose (Annexures-A and B).

The birth and death slips are provided with columns wherein all the relevant information required for registration could be filled in.

The Maternity Assistants should carry these booklets while going for field visits. Whenever she comes to know of the occurrence of vital events, either during her routine visits or through the enquiry in the village or by contacting the local agencies, she fills up the slip in triplicate using carbon sheets. She could hand over then and there the original to the party with instruction to register the event with the registrar. The place of registration is also indicated therein. The purpose of this is to educate the party about the necessity of registration. The duplicate is forwarded to the Health Inspector of Primary Health Centre *every week* for getting these events registered in the registers in case the party fails to act on the advice of the Maternity Assistant. The third copy is retained as office copy with the Maternity Assistant.

The Maternity Assistant shall report all the births taking place in her area, for which ante natal services have been provided by her. She should not restrict the reporting only to the births attended by her. She should also seek the co-operation of trained and untrained Dais working in the intensive area in ensuring completeness of registration of births and deaths.

(iv) The vital events occurring in the Primary Health Centre or the Maternity Centres should be duly brought to the notice of the registrars. The Medical Officer of the Primary Health

Centre should himself sign the birth slips of the deliveries taking place in his centre and forward them to the concerned registrars through the Health Inspector. The Health Inspector should periodically check as to whether the events are properly registered.

(v) The Health Assistants who are conducting house to house visit for the purpose of vaccination in the intensive area should enquire and detect all births and deaths occurring in the household during the previous one year from the date of visit. All the vital events so detected should be separatly noted with all the relevant particulars required for registration. These events should be later checked with the entries of birth and death registers with the help of the registrars and all the unregistered events duly registered.

(vi) The health personnel—namely the Health Inspector, Health Visitor and Maternity Assistants, during their routine visits to the intensive villages should try to contact the defaulters of births and deaths notification either personally or through the village leaders and ascertain the reasons for failure to register the events; the benefits of registration, its necessity and the legal provisions relating to it should be thoroughly explained to them. The village munsif should be required to arrange for a tom tom once in a month and remind the public regarding their duties with regard to registration of vital events. Health Committee meetings, Madar sangams and Panchayat meetings can serve as forums for propagating information on registration. The members can be requested to spread these ideas among the public. As per G.O. Ms. No. 3142, dated 24th November 1961, every Panchayat should hold a monthly meeting and the President of the Panchayat should read out entries relating to the births and deaths that have been registered in the preceding month. Panchayatdars present at the meeting can bring to the notice of the President all unregisterde births and deaths and get them registered. This will educate the Panchayat members about the importance of birth and death registration.

(vii) Regarding the improvement of the quality of registration the Health Inspector should impress on the registrars during the quarterly meetings, the methods of eliciting accurate information regarding birth or death. The common defects noticed in a birth and death register are those relating to the age of the mother, the parity, the date and place of birth of the child, the cause of death and the age at death. By proper enquiries, the village Registrars should be able to improve on the accurracy of the above factors.

(viii) The Medical Officer should verify in the intensive area all the deaths classified under maternal mortality, Infant mortality, smallpox and cholera. He can carry out such a verification during his afternoon visit to sub-centres. The Medical Officer will investigate *every* infant death and maternal death occurring in the intensive area and enter the true cause of death

in the Death Register and also in the Maternity Record Card and Infant Card pertaining to the case. *In a year* the Medical Officer will have only five or six maternal deaths and about 100 infant deaths to investigate in the intensive area. The Health Visitor and Maternity Assistants will render all assistance in this work.

(ix) The Health Inspector should indicate by charts the population and the number of births and deaths registered for every village or hamlet in the intensive area either in his office or in the Primary Health Centre.

Non-intensive area.—For non-intensive area, in addition to the routine work of vital statistics that is being carried out at present the items of work (iii) and (v) mentioned above in connection with the intensive area should be implemented. With regard to the obtaining of the birth and death slips from the Maternity Assistants and verifying the registration, the Health Inspector might not be able to cover the entire area every month as in the intensive area. As and when he receives the birth slips from the Maternity Assistants he can despatch them to the registrars by person or post whichever is convenient. He should arrange to have a meeting of the registrars of the sub-centre area at least once a year, preferably in the last quarters of the year. He should utilize this meeting for correcting the defects noticed in the birth and death registers and bringing the registration upto date.

CHAPTER V

MATERNITY AND CHILD HEALTH

Ordinarily Public Health activities are concerned with the well-being of all groups in the community without any distinction of age, sex, race, etc. But the pregnant mother and the child have been considered to require special attention in view of the special risks the mother is exposed to during pregnancy and the child is exposed to in an adverse environment. There is urgent need to minimise the undesirable influences on the mother during the period of pregnancy which may affect subsequently the health of the mother and the expected infant and may even jeopardise their lives. Though some progress has been made in the field of Maternal and Child Health much remains to be done to reduce the mortality and morbidity occurring among this vulnerable group by a well-conceived and executed Maternal and Child Health Programme in the area served by the Primary Health Centre. The responsibility for these services is to be laid on the community and greater emphasis must be laid on health promotional activities and preventive services. Conscious effort must be made by the team—Medical

Officer, Health Visitor and Maternity Assistants in the Primary Health Centre to build up the physical basis of health of the mothers and children living in the area in the conditions existing in the rural areas and the paucity of well-planned health services for the people.

For providing these services the staff available is as follows :—

Medical Officer	1
Health Visitor	1
Maternity Assistant (Main Centre) ..	1
Maternity Assistants (Sub Centres) ..	3

Besides the above, a few Maternity Centres function under the auspices of the Panchayat Union Council and that of Government—the Backward Area centres under the direct control of the District Health Officer. Every Panchayat Union Council is authorised to open maternity centres on the basis of one for every 10,000 population subject to a maximum of ten for a block. It should be obvious that the services available are far too inadequate for the care of all mothers and children in a block. Therefore a need arises for supplementing the Maternity Assistants' services by that of *trained Dais* in villages.

In the field of Maternal and Child Health, it is necessary for the staff of the Primary Health Centre and the District Health Officer to carry out a well conceived and inter-related series of activities each of which looks forward to the subsequent periods of life (infant, pre-school, school child, etc.). The objectives of all phases of the programme should be both *Service and Education.*

This service should include the following :—

(*a*) Institutional midwifery in the Primary Health Centre itself where provision exists for 4 beds.

(*b*) Domiciliary midwifery to be conducted by the maternity assistants of the main and sub-centres.

(*c*) Pre-natal and post-natal care of mothers in the clinic and in the houses.

(*d*) Care of the nursing mother *and* of the infant up to one year of age and pre-school child.

(*e*) Training of practising indigenous Dais and continuous supervision of their techniques of domiciliary midwifery.

(*f*) Care of the school children dealt with under "School Health".

Institutional Midwifery Service

At present provision has been made for 4 beds at the main centre for labour cases. It is realised that these beds will not be adequate to meet the needs of all labour cases which may occur in the area of the Primary Health Centre—which may be of the order of about 3,000 in a year. In the " Intensive Area " (3 miles round about the main centre of Primary Health Centre) with a population of about 10,000, four hundred births may be expected to take place in a year based on a birth rate of 40 per thousand population. On the average one bed in the institution will cater to about 30 cases of labour per year. Thus the bed provision in the Primary Health Centre will be adequate only for about 120 to 150 (if the duration of post-natal stay is reduced to a week or even less) labour cases in a year. This brings into prominence the need for adequate domiciliary midwifery service by the Maternity Assistants and the *trained* indigenous Dais. The Maternity Assistant at the main centre will conduct at the main centre normal deliveries and assist the Medical Officer, whenever required, in abnormal or complicated cases of labour. The services of the Health Visitor should also be available to the Medical Officer for such abnormal cases.

Domiciliary Midwifery Service

The Maternity Assistants at the main centre and sub-centres should as a routine, undertake labour cases in the houses. In view of the provision of beds in the main centre, it should be the duty of the Health Visitor and the Maternity Assistant of the main centre to educate all the registered cases to have their delivery in the institution under the management and care of the Medical Officer. The popularity and support of the Maternity Assistant (main centre) with the local people will be judged by the number of cases delivered at the institution and 100 per cent registration of ante natal cases in the " intensive area ". To the extent that institutional deliveries go up in number domiciliary cases conducted by the Maternity Assistant will drop. It must be the aim of the Medical Officer and maternity staff to account for at least 60 per cent of labour cases occurring in the " Intensive Area ". About 20 per cent of cases may be allowed for the indigenous Dais. During the period that mothers stay in the centre the opportunity must be availed of for education of mothers in childcraft and desirable health habits for the mother. Stress may be laid on the following : (*a*) Care of the lochia, (*b*) Breast or Bottle feeding of infants, (*c*) when to replace mother's milk by cow's milk and the dilution recommended, (*d*) mother's diet. This may be followed up in the homes by Health Visitor and Maternity Assistants.

In the sub-centres where there are no provision for beds, the Maternity Assistants have perforce to rely on domiciliary service for coverage of the population. Each of the Maternity Assistants has been set a target of 13 cases per month—156 per year. This should just cover 75 per cent of all the labour cases that could be expected in the 'Intensive Area'. (5,000 population round the sub-centre) 20 per cent may be allowed for the share of trained Dais.

The Medical Officer will have to supervise some of the labour cases conducted by the Maternity Assistants occasionally. Similarly the Health Visitor will also on her rounds supervise the labour cases conducted by Maternity Assistants. As most of the deliveries take place at night the Health Visitor will have to make night halts at sub-centres to effectively supervise the work of Maternity Assistants. It is to be impressed on the staff that the provision of natal services alone will not constitute an adequate service in the Maternity and Child Welfare field. The general public have to be weened away from the habit of thinking that the natal services alone occupy a very prominent place. This should be done steadily by the staff of the Primary Health Centre so that families come to recognise the organic continuity of care and services for the pregnant mother from the time of conception up to the time the infant is one year old and reaches the school age. It is only such a composite service that would prevent some of the avoidable complications of pregnancy but also promote the health of the mother and child.

It follows from the above that for every case that is delivered at the Primary Health Centre or at home, post natal care must be assured for a period of 7 days at least. This must be followed up with care of the nursing mother and of the infant, the pre-school child and the school child. While the Maternity Assistant is responsible for the conduct of labour and post natal attention for a week after delivery, the Health Visitor will have to take over the care of the nursing mother and the infant, pre-school and school child. Thus continuity of services and care is ensured for the mother and child.

Pre-natal and Post-natal care of mothers

Pre-natal care of mothers at periodical intervals should form a very important component of a well-organised Maternity and Child Health Service. The Maternity Assistants of the Primary Health Centre should tour the villages at fixed intervals in a week and contact *all* pregnant women and register them in the Nominal Register of Ante natal Labour. Generally the registration should be done by the fifth month of pregnancy. A separate Maternity Record Card is also prepared for each registered

case. It is very important that the Maternity Record Card is filled in completely and conscientiously. For a primi this will be an important document for future pregnancies. For the multiparae the previous obstetric history contained in the card is an important guide to the probable course of pregnancy in the present instance. The Medical Officer and Health Visitor should check the records frequently and correct any entries that are wrongly made.

The pre-natal examination should include—

(*a*) Pelvic measurements in a primiparae.

(*b*) Blood pressure recordings.

(c) Estimation of, Haemoglobin levels.

(*d*) Urinalysis.

(*e*) Records of weight.

(*f*) Abdominal Examination.

It can be stated that every pregnant woman should have atleast 5 examinations during the course of pregnancy of which one should be spaced to coincide within two weeks of the expected date of confinement. The Medical Officer must arrange to conduct ante-natal clinics in the main and sub-centres once a week assisted by the Health Visitor and the maternity assistant of the centre concerned. The B.P. Recordings and Haemoglobin estimation could be done by the Medical Officer while the Health Visitor and Maternity Assistant can prepare the Maternity Record Card, record weight, examine urine for albumin, etc., Such a division of labour between the Medical Officer and the auxiliary staff, leave more time for the Medical Officer to be spent on the condition of the mother requiring attention and for Health Education. The Medical Officer can also take the opportunity of the Pre-natal clinic to educate the mothers on personal hygiene during pregnancy nutrition and the paramount need for skilled attention during confinement. Also he can supervise the quality of the work of his auxiliary staff and assess their awareness of the problems of pregnancy and how to meet them. Firm arrangements could also be made for conducting the delivery at institution or at home. There is need for the Medical Officer, Health Visitor and Maternity Assistants to work more as a team in the Maternal and Child Health Programme. To this the Medical Officer could assist the Health Visitor and Maternity Assistants jointly in planning their programme of work.

A watchful eye must be kept for abnormal presentations which when detected, could be referred in time to higher care either in a Taluk Headquarters Hospital or District Headquarters Hospital.

Albumin Uria and high blood pressure during pregnancy are liable to be followed by Eclampsia with even fatal results to the mother and child. Timely detection of this condition could lead to proper medical management by the Medical Officer and his staff with benefit to both mother and child. Anaemias during pregnancy if not properly corrected may be greatly worsened by the loss of blood during labour. Anaemia singly is responsible for 15 to 25 per cent of maternal deaths and in an equal proportion it was found to be an associated factor. The Health of the mother and that of the child is bound to suffer by this condition. Tuberculosis disease in the mother, if not attended in time, may lead to a worsening of the condition in the mother after delivery and expose the infant to tuberculosis infection with fatal complications. Another condition which has a profound bearing on the mother and to a greater extent on the foetus or child after delivery is Syphilitic infection. It is an easily remediable condition with effective treatment by Penicillin.

Tetanus Neonatorum is still a common and invariably fatal infection in our country though the exact incidence of infection is not known. The infection enters through the umbilical wound. The role of untrained Dais with their crude methods of conducting deliveries, their ignorance of asepsis and unhygienic practices in the care of the cord cannot be minimised in this condition. The placenta is permeable to tetanus antitoxin and this is a prophylatic factor of great significance. Active immunisation of all pregnant women coming under the care of a Primary Health Centre with *Tetanus Toxoid* (one dose at the first Pre natal visit and the Booster towards the last trimester) is strongly recommended as a routine in Pre-natal clinics in Rural areas. Maternally transmitted passive immunity will protect new born infants against Tetanus.

The above are offered as illustrations of the conditions which when detected and treated properly, will bring immense benefits to both mother and child and thus to the family and community. Pre natal care therefore forms a very important component of any Maternal and Child Health Programme.

Difficulties may be encountered in persuading mothers to attend clinics for Pre natal examination and advice at the Primary Health Centre at stated intervals. But every effort should also be made by the Health Visitor and Maternity Assistants to gather the mothers at the centres on the pre natal clinic days to be conducted by the Medical Officer. The knowledge of home conditions of the case registered by the Health Visitor and Maternity Assistant should be invaluable to the Medical Officer in his assessment of the case in the clinic. Sometimes Pre natal care has to be taken to the house of the mother in the village itself. Hence every Health Visitor and

Maternity Assistant should systematically visit every house and every village in the 'Intensive Area' in a planned manner, register cases, give advice in the home itself or gather mothers for clinic in the village itself, arrange for delivery in the Primary Health Centre or in the home, refer complicated case to Medical Officer or to higher medical authority, etc.

For every mother (ante-natal case) registered with more than three living children, the Auxiliary Nurse Midwife or Maternity Assistant should invariably give advice on Family Planning. The fact of having done so *must be entered* in the A.N. case sheet itself and the Health Visitor must also follow through on this advice later on.

N.B.—All cases of still births must be entered in Red ink in the Nomin register.

Care of the Infant, Pre-school, and Nursing Mother

The infant should be followed up systematically up to its 1st birthday by the Health Visitor. The recommended schedule of visits is as follows :—

Three visits during the first month.

Monthly up to six months of age

Quarterly up to first birth day.

Annually thereafter up to school entry.

One of the primary purposes of the 6th month visit is to promote immunisation against smallpox. It would be preferable if small pox vaccination is completed even at the 3rd month as infants do show ability to develop antibodies to smallpox at this period of life.

Regular 'mothers and infant' clinics must be held at the Primary Health Centre and Sub-Centres where advice on feeding, personal hygiene, growth and development and immunisations are given. As for the feeding of infants, there is no barrier to breast feeding in this country especially in rural areas. But the critical stage is reached when the infants are weaned from the breast at the 9th month or 1st year when the nutrition of the infant suffers grievously. This is the stage to watch for in the infant's development, as *Kwashiorkor* a well recognised clinical entity caused by Protein deprivation in the diet of infants and children—is common at this period of weaning. It was found that all the pathological changes due to protein deficiency was reversible with protein therapy. At the time of weaning, the infant or toddler is switched on to highly starchy foods. So mothers have to be educated to provide balanced food to the child. Pulses, leafy vegetables should form part of the daily diet of the child. Supplements like skimmed milk, Vitamin A and D capsules, iron, etc.,

should be added to the diet. Vegetable foods based on Bengal-gram and groundnut cake flour have also yielded favourable results. These supplementary foods can be arranged through the Maternal and Child Health Centres and Primary Health Centres. The Health Services for mother and child should also provide for the supplementary diet of pregnant women and nursing mothers. Skimmed milk, iron and vitamins are the recommended supplements that can be distributed in the Maternal and Child Health Centres and Primary Health Centres. These centres should also provide education to mothers in nutrition. It is a common experience in the Health Unit, Poonamallee, and in other Maternal and Child Health Centres that mothers do not generally bring their healthy babies or children to the clinics but attend only when the child is ill. The importance of periodical supervision of the "Well Child" should be impressed upon the mother by the Medical Officer, Health Visitor and Maternity Assistants. Sustained education among mothers must be carried on to achieve satisfactory "Well Child" supervision. In the "Well Child" clinics an ideal opportunity presents itself for initiating and completing all the immunization procedures.

Content of "Well Child" Care

A. *Laboratory Procedures—*

Haemoglobin determination—once a year.

Stools examination—once in six months.

Tuberculin testing and X-ray of positive reactors (specially the large reactors with 18 mm plus to standard P.P.D. tuberculin).

B. *Clinical Examinations and Health Promotional Activities—*

(*a*) Health supervision—Height, weight and noting of milestones of development—(Teeth, vision and hearing testing).

(*b*) Detection and care of any diseases and infections, aberrations of growth, etc.

(*c*) Specific advice on food and nutrition at each visit.

C. *Specific Health Protection—*

B.C.G. against Tuberculosis.

Smallpox vaccination, third to sixth month.

D.P.T.

I	II	III
fourth month.	fifth month.	sixth month.

I Booster, 18th month.

II Booster at School entry.

Training of Indigenous Dais.—A large number of deliveries are still conducted by these category of persons in rural areas who carry on these midwifery services as a hereditary profession. So the services of this class of women could be utllized for the benefit of the community after a short course of training for six months. The Dais will primarily be utilised for natal services in the homes of cases. During the training period of six months special attention is given to the weaning of the Dai from crude and unhygienic practices she has been accustomed to and introduce some knowledge of cleanliness and asepsis into the work so that the quality of her work is improved and puerperal sepsis is reduced to the minimum. She is also trained to recognize departures from normal and to seek readily the assistance of Health Visitor, Maternity Assistant or Medical Officer in such cases. At the end of the satisfactory completion of training, they are issued with a mid-wifery kit for their practice.

An important objective of the programme of Dais training is to ensure that the Dais continue to receive technical support and guidance from the Health Visitor and the Maternity Assistants of the Primary Health Centre who were in charge of training the Dais in the Primary Health Centre. In order to achieve this object, it would be necessary for the Health Visitor and Maternity Assistants to have a register of the trained Dais practising within the jurisdiction of the main centre and the sub-centres and keep in close touch with their activities.

The Dai may be encouraged to bring her cases to the pre-natal clinics conducted at the main and sub-centres. The Health Visitor and Maternity Assistant should also supervise the Dais when they actually conduct deliveries in the homes and correct any of the practices which are not in accord with accepted midwifery practice. Deliveries conducted hy the Dais within the jurisdiction of the Maternity Assistant should be shown seperately in the nominal Register of Ante-natal Labour. The Health Visitor and Maternity Assistant must ensure that the births attended by the Dais are reported promptly to the Village Munsifs in charge of registration of births and deaths.

Refills (*e.g.*), Boric powder, cotton thread for cord ligature, Dettol, Soap, etc., would be supplied to Dais from time to time from the Primary Health Centre. A steady supply of these items must be ensured to the Dais.

Health education aspects of Maternal and Child Health Services:—Health education is to be looked upon as a basic component of the Maternity and Child Health Services now rendered in the Primary Health Centre. Every opportunity that presents itself for a meeting with the mother either at home or in the Primary Health Centre and its sub-centres must be made

use of for Health education. With the personal relationship that should have been built up since the time of registering the mother for ante-natal care, this should not present any difficulty. The ante-natal clinics conducted at the Primary Health Centre (and sub-centres) periodically by the Medical Officer should be looked upon, by all the staff as an opportunity for education. Cases requiring Medical Officer's attention alone should be referred to him by the Health Visitor and Maternity Assistant. Encouraging mothers to take to institutional care and increasing the percentage of mothers taking such care will be a fruitful field for education. Health education of mothers about the need for periodical ante-natal examinations is very essential. Certain of the most prevalent morbid conditions during pregnancy, like anaemias, toxaomias of pregnancy, nutritional deficiencies during the pre-natal and post-natal stages may be taken up for discussion during these clinics. Mothers may be given instruction in infant feeding. Mothers classes may be utilized for giving information and clearing of doubts that mothers may have. Also these sessions may be utilized for demonstration of hygienic way of handling milk, its dilution for infants and for preparing recipes from Bengalgram powder. One session may be devoted to 'immunisation' another to the 'role of vitamins' in building up the body and so on. The Medical Officer will in the initial stages take the leadership for organizing these sessions but later the Health Visitor can be encouraged to conduct similar classes for mothers at the Primary Health Centre and sub-centres. Mothers who have improved as a result of iron treatment or infants who have improved considerably as a result of Bengalgram powder milk may be demonstrated to other mothers in these classes. Teachable points may be listed by the Health Visitor under the guidance of the medical officer and entered in a chart for teaching purposes.

CHAPTER VI

FAMILY PLANNING

Despite the significant progress in economic development that has taken place in India in the past decade, the *per capita* income has not gone up noticeably because population growth has largely neutralized the increases in National income. According to demographic experts, the rate of growth is likely to run as high as to 2·5 per cent per annum in the sixties and 2·2 per cent in the seventies in Asian countries. No quick and spectacular fall in the growth rate can be expected, because death rate is likely

to go down simultaneously with any fall in birth rate. With the advances in modern medicine and the development of health services in this country, death rate is likely to go down much faster than the birth rate.

The objective of the National Family Planning Policy is to bring down the birth rate from 40 per 1,000 to 25 per 1,000 by 1973 so that the net reproduction rate may be reduced to 15 per 1,000. An immense nation-wide effort is necessary to achieve this desirable goal.

The Family Planning Programme includes a number of different elements. These different elements working together under a sound administrative frame-work will in due course have the desired effect of gradual adoption by the community of the social norm of a small family. These elements are—

(*a*) Intensive community level education through existing public health agencies and also specially trained extension workers in family planning.

(*b*) Availability of contraceptive supplies at convenient 'depots' located in villages within the reach of villagers who need them.

(*c*) Clinic services, where contraceptive advice will be available freely. The clinic will also play an important role under (*a*) and (*b*) above.

(*d*) An administrative set up which will help maintain and extend all the above features of the programme throughout the community. It will also be responsible for Family Planning Training and Research.

FAMILY PLANNING PROGRAMME IN THE PRIMARY HEALTH CENTRES IN MADRAS STATE

Madras State has accepted sterilization as the safest and cheapest method of limiting the family. In accordance with this policy, administrative measures have been stream-lined from the State headquarters to the Panchayat Union Council level in order to popularise this measure. Other measures of contraception have also been made available through the Public Health Agencies to the public who wish to take advantage of these measures. The Primary Health Centres will play an increasingly important role in the Family Planning Programme as they are in a position to influence and provide services for the people living in the rural areas in the Blocks.

Services provided.—The Health Visitors in the Primary Health Centres have been trained in Family Planning for a period of a fortnight at the Family Planning Training Institute, Government Hospital for Women and Children, Madras. Some of the Maternity Assistants have also been trained in Family Planning. They give advice to mothers attending the Primary Health Centres and Maternity Sub-Centres on Family Planning and also distribute contraceptives to mothers willing to follow some method. Mothers willing to undergo Salpingectomy are referred to the nearby Government hospitals for the same. Where the husband is willing to undergo vasectomy, he is advised to get the operation done at the Primary Health Centre itself, if there are facilities there for the same. Otherwise he is referred to the nearest Government approved surgery for undergoing the vasectomy operation. Contraceptives are *stocked in all Primary Health Centres.* They will be stocked in all Sub-Centres and Maternity and Child Health Centres in the Block also. The Medical Officer, Primary Health Centre may also explore the possibility of designating leaders in villages as 'Depot holders' for contraceptives on a voluntary basis. But it must be ensured that these leaders are acceptable to the community as depot holders. The work of the Maternity Assistants in the distribution of contraceptives to mothers and the educational effort in this direction is supervised by the Health Visitor. The Grama Sevaks of the Block are also in charge of distribution of condoms to the villagers who require them and the Health Inspector is expected to supervise this distribution.

Approved surgeries.—Facilities for vasectomy operation have been provided in most of the Primary Health Centres. Out of the one hundred and sixty-five Primary Health Centres at present in this State, 143 Primary Health Centres have been declared as Government approved surgeries for vasectomy operation. The Medical Officers working in these Primary Health Centres have been trained at the District Headquarters Hospital for a period of a week in vasectomy operations. When ever a new Medical Officer is posted to a Primary Health Centre, the District Medical Officer arranges for his training in vasectomy for a period of a week at the District Headquarters Hospital. The District Health Officers will, in future, be responsible for getting the Medical Officers trained at the District Headquarters Hospital in consultation with the District Medical Officers.

ORGANISATIONAL ASPECTS OF FAMILY PLANNING PROGRAMME THROUGH PRIMARY HEALTH CENTRES

The extended Family Planning Programme contemplated by the Government of India in their report for 1962–63 envisages four more field workers Health Inspectors, Family Planning (each for a population of roughly 20,000) and one Extension Educator for

family planning for each block. This team will work under the immediate administrative and technical control of the Medical Officer of the Primary Health Centre. The chapter on "Proposed Programme" in the Family Planning report for 1962–63 prepared by the Director of Family Planning (Central) explains in detail the functions and roles of these two additional categories of health workers, viz., Family Planning Field Workers and Extension Educators. The Government of India in colloboration with the State Government are also starting many training centres to train these categories of personnel. However, it is expected to take some time more before these additional family planning personnel are going to be trained and posted to every Community Development Block in our country. Till such time it is necessary to expand and intensify the family planning activities in a Primary Health Centre through the existing categories of personnel.

Goals.—The three basic requirements for the implementation of an effective family planning programme in a Community are—

(1) *Group acceptance.*—Each individual should know and feel that the immediate society or community to which he belongs has agreed, as a group, that having a smaller family size is the normal, desirable behaviour for the members of that group. Without such a feeling, any couple will hesitate seriously to adopt family planning; with such a feeling most couples will proceed to obtain the necessary information needed for them to conform to the norms of their group.

(2) *Knowledge about Family Planning.*—Two types of information are desirable. Firstly, knowledge that having a smaller family is valuable, for various personal reasons. Need for conformity to group norms of family size is value enough to justify action for most individuals. In addition, people should know that smaller family size helps them to achieve other values, such as economic welfare and better health for the overall welfare and happiness of the family.

Secondly, people should have further knowledge about specific methods of birth control. Knowledge of contraceptives methods refer to the normal use of abstinence, withdrawal, and the rythm method, as well as knowledge about the possible availability and use of condoms, foam tablets and other divices.

(3) *Availability of supplies.*—Any couple wishing to have simple contraceptive supplies should be able to get them within easy geographic distance, without questions being asked, and without other psychological barriers being interposed such as inconvenient time of day; having to wait or lack of privacy.

Programme.—In a Primary Health Centre, the Medical Officer, Health Inspector, Health Visitor and Auxiliary Nurse Midwifes should try to achieve the above said three goals in at least a few selected villages. As a beginning all the villages in the Intensive area should be taken up for an Intensive Family Planning Programme. Even in this intensive area a few (2 or 3) co-operative villages could be chosen as model villages and the programme implemented in an intensive manner and then extended to other villages in the intensive area. The Health Inspector and Health Visitor should visit these model villages and should select at least one male and one female leader from each community in a village to be the contraceptive depot holder for the needy couples in the community. A training camp (for one or two days) in family planning should be conducted for the selected leaders of the villages either in the village itself or in the main village where the Primary Health Centre is situated, with the help of the Medical Officer, Primary Health Centre and Block personnel. The initiative for the selection and training of male leaders should be taken up by the Health Inspector and of female leaders by the Health Visitor. A simple recording system is to be maintained by each depot holder regarding the contraceptives distributed by him to the needy couples (Annexure-D.).

The Health Inspector and Health Visitor while making visits to these villages should guide and assist the depot holders by—

(*a*) arranging group discussions on Family Planning in every community with the depot holders;

(*b*) replenishing the stock of contraceptives with each depot holder ;

(*c*) preparing a list of needy couples for the village and use the same to see that every needy couple is supplied with information, group support and ready contraceptive supplies ;

(*d*) arranging facilities for persons desirous of undergoing sterilisation operations, in consultation with the Medical Officer of the Primary Health Centre ; and

(*e*) arranging periodical re-union meeting of the leaders so as to plan the programme of work.

The guidance and supervision of the male Depot Holders will be done by the Health Inspector and of female Depot Holders, by the A. N. Ms and Health Visitors.

Reports and Returns.—Periodical reports and returns prescribed by the Director of Medical Services are given in the circular that is appended. These should be submitted here after through the District Health Officers to the State Family Planning Officer, Madras. The registers pertaining to Family Planning have to be maintained in each Primary Health Centre as prescribed.

District Family Planning Committees.—Representatives from selected Panchayat Unions in the district are members of the District Family Planning Committee. The District Health Officer and the District Medical Officer are members of this committee. This committee meets once in every six months and discusses the progress made in Family Planning and brings to its notice the difficulties in implementing the scheme. The Medical Officers of the Primary Health Centres should prepare quarterly reports on the implementation of the Family Planning Scheme and send one copy to the Director of Public Health, one to the State Family Planning Officer and submit one copy for discussion at the District Family Planning Committee meetings.

CHAPTER VII

SCHOOL HEALTH SERVICE

* "The functions of a School Health Service are—

(1) Health measures, preventive and curative, which include—

A. Health supervision and the detection and treatment of defects ; and

B. The creation and maintenance of an hygienic environment in and around the school.

(2) Measures for promoting positive health, which include—

A. The provision of supplementary food to improve the nutritional status of the child ;

B. Physical culture through games, sports, etc, ; and

C. Health Education through formal instructions and the practice of an hygienic mode of life."

Organisation of a School Health Service through the Primary Health Centre

On an average the population of school-going age attending schools in Panchayat Union area with a population of about 80,000 can be estimated at about 15,000. It is neither possible nor necessary that all these children should receive the direct attention of the Medical Officer working in a Primary Health Centre having multivarious duties and responsibilities. So it is enough if in the early stages only the primary school children—6—11 years in the 'Intensive area' are brought into the scheme. This population will be about 2,000.

*Health Survey and Development Committee Report.

Results of Surveys and Studies conducted in this country have shown that the Medical Officer can realistically examine only about 30 to 40 children in an afternoon working for about 3 hours. Based on this, with the Medical Officer devoting two after-noons in a week for School Health Services, he can be expected to cover about 2,000 children in about 40 weeks of a school year.

Studies done in the United States (Astoria Study by Dr. Nyswander in New York) as well as the School Health Committee of the Government of India clearly bring out the value of the school teacher as the focus in the School Health Service. Involving the school teacher also helps in an adequate and regular follow-up of the children after the health appraisal. It is also important that the parents of the children as well as the local authority like the Panchayat or the Panchayat Union must be involved in this Scheme. It is important that the parents should be present at the inspection, as it is an opportunity for them to learn the Medical Officer's impression of the child and it helps the Medical Officer to get reliable information about the child's past illness. All the components of the School Health Service Programme, namely :—

Attention to School Sanitation ;

Health Appraisal of School children and their follow-up ;

School Health Education through teachers in the school ; and

Nutrition—should find a place in the Scheme.

School Sanitation

To start with the Medical Officer with the help of the Health Inspector and Health Visitor can take up schools in the "Intensive Area" alone for the provision of adequate water-supply, sanitary facilities like latrines and methods of sullage disposal like soakage pits or kitchen garden and improvement of lighting and ventilation. In this, the team of the Primary Health Centre has to work with the Panchayat Union on a two-year phased programme so that with the help of the finances available with the Panchayat Union and any other agency like the Harijan Welfare fund, adequate sanitary facilities in schools could be provided. The Primary Health Centre team should simultaneously launch an educational programme for the acceptance and use of the sanitary type of latrines and other facilities by the teachers themselves to start with, and also by the parents of the children at school. The school sanitary facilities should serve as a demonstration aid for cultivating the habit of properly using sanitary facilities by the children, teachers and the community.

Comparatively little attention is paid at present to the provision of latrines and urinals attached to schools. It is absolutely essential to inculcate in school pupils the habit of using sanitary convenience and the school is therefore the best place where this habit can be properly formed. As part of the School Health Programme this must be brought home to the authorities of the Education Department and the Panchayat Union Councils. The authorities of the Village Panchayats should be specially requested to look after the sanitation of the environment around the school premises.

Water supply.—Provision for good and potable drinking water must be made in the schools. Locally available materials may with imagination be made to serve the purposes of hygienic storage of water in covered vessels. A tap at the bottom of the vessel should always be provided to avoid contamination by frequent handling by pupils of stored water.

Ventilation and Lighting.—Wherever possible attempts must be made to improve lighting and ventilation by proper siting of doors and windows at a cheap cost. It must be ensured that the black board is well lighted and is visible to the child sitting in the last row of the class.

Health Appraisal and Follow up

The first requisite would be to select Primary Schools located in the 'Intensive Public Health area' round about the main centre of the Primary Health Centre and start by working in one at a time. In the first visit, the Medical Officer, Health Visitor and the Health Inspector should go as a team after due arrangements have been made with the Headmaster with whom the programme should be worked out in this manner. The Primary Health Centre Team should continue their activities in one school and only after the programme is soundly established with the teachers' co-operation, should move to another school. Gradually extending in this way, all the schools within the 'Intensive Area' should be taken up in the programme. Later it could be extended to other schools in the 'Intensive Area' of each of the sub-centres. The Health Visitor and the Health Inspector should plan their work in this programme taking into account their expected visits to the schools both with the Medical Officer and independently of him.

In the schools selected, the first step is the Orientation Training for the teachers to recognise departures from normal in the school children. This may be done in two steps—

(1) School Health Inspection of children by the Medical Officer offers a fine opportunity to the teacher to learn what is abnormal.

(2) This should be followed by Teacher Training Sessions where demonstration and information is given to the teachers. They may be encouraged in such sessions to show how they recognise abnormal cases at least the common ailments among school pupils.

During follow-up visits the Teachers may be entrusted with responsibility for recording their findings in the School Health Card and this may be reviewed by the Medical Officer. This initial health appraisal is done by the teacher himself and he refers such children to the Health Visitor or the Health Inspector, who in turn will refer them to the Medical Officer. The Health Inspector and the Health Visitor after adequate training by the Medical Officer of the Primary Health Centre should programme to visit each one of the schools in the 'Intensive Public Health Area' at least once in 15 days. During this visit, they must see all the children whom the teacher feels, require their attention. This is the stage of secondary screening when the para medical worker decides those cases which will require the attention of the Medical Officer after treating minor ailments, malnutrition, etc., which they themselves could undertake. Only 10 per cent of the children after secondary screening by the para medical staff will require the attention of the Medical Officer. These children should be arranged to be brought to the clinic at the Primary Health Centre by the Health Inspector or Health Visitor on the fixed school clinic days in a week. At such examinations at least one of the teachers from the school should invariably accompany the children to ensure the proper follow-up of the advice given by the Medical Officer. Those requiring attention for visual defects, auditory defects etc., could be referred to a higher medical institution at the District Headquarters or the Taluk Headquarters Hospital. It is essential to this screening procedure that the Primary Health Centre doctor should train the Health Visitor, the Health Inspector as well as the teacher to to use simple visual charts like Snellen's type for recognising visual defects in children.

At the school, each child must have a health card (*pro forma* given in—Annexure E.) which should be filled up jointly by the teacher and para medical worker. During the periodical visits to the school the para medical worker should carefully go through the health card and see that all the entries are properly made.

Initial Health appraisal of all children entering the first standard. It is not possible even though it will be ideal to give an initial health appraisal for all children entering the Primary, Secondary and the High schools. But to start with the programme will be adequately served if at least all the children entering the Primary schools can be given a good health appraisal at the time of joining the school. The Health appraisal has to be done by the Medical Officer of the Primary Health Centre who in addition to the regular physical examination should also bestow particular attention on the vaccinal status of the child, any serious defects noticed, which will handicap the child, etc. This examination has to be completed for all the new admissions within 6 months of their entry to the school, and during this examination by the Medical Officer it should be ensured that the concerned class teacher, the parent, as well as at least one member of the Panchayat Union like the Commissioner or Chairman or the local Panchayat President is present. This will ensure the awareness of the child's condition by the parents and their adequate follow-up as well as serve as an educational approach to parents and the community leaders. At the time of the initial health appraisal, health cards should be opened for each child. This card should follow the child as it gets promoted from one standard to another and accompany the child at the time he leaves the Primary school either to join Secondary school or for any other purposes.

School Health Clinic.—The School Health Clinic conducted on two afternoons at the Primary Health Centre must be utilised by the Medical Officer and his staff for secondary health appraisal of the referred children from the schools and also for those referred after the initial health appraisal at the beginning of the year. Such clinics in addition to serving as referral clinics can also be made use of, as educational situations for the parents and teachers with regard to improving the health of the school children.

A system for ensuring treatment to at least the majority of those needing it is essential, if the health appraisal is to have any purpose. When a group of children need treatment at the school session, it should be possible to prescribe for and treat many of them on the spot. The parents' consent for treatment would have to be taken into consideration, but this would pose no great problem if there had been adequate preparation of the villagers through meetings before hand. Both the Health Visitor and the teacher should take the responsiblity of carefully explaining how the treatment is to be given to the child, and all relevant information should be provided to the parents. The teacher himself should supervise daily treatment at the school.

For children whose treatment should be carried on at the Primary Health Centre or at a referral institutions, the Health

Visitor should follow up at short intervals, through the teachers, in the matter of gaining the parents' co-operation for necessary visits and the teacher himself should follow-up on his own initiative. A few home visits may be warranted in some cases during treatment.

School Health Education—The Primary Health Centre staff should work closely with the teacher in planning for health and hygiene teaching. They should furnish the teachers with up-to-date information on public health, and take an appropriate part in school activities, but the major responsibility for health teaching rests with the teachers. The Primary Health Centre staff should further strengthen health education through activities with parents, presenting them with information corresponding to what is being taught to the children in the schools.

Nutrition.—Periodic medical examination of school children in some parts of the country have shown that mal-nutrition is widely prevalentamong this group, leading to impairment of physical and mental growth. 77 per cent of school children exhibit varying degrees of malnutrition signs of deficiency of Protein, Vitamin A, B complex, Calcium and gross calorie deficiencies also are found. Incidence of Xerophthalmia, Bitots spots, etc., was as high as 14 per cent in some areas. Against this background the importance of the school meals programme cannot be minimised. This scheme has been given high priority in this State among the measures for safeguarding and improving the nutrition of children. The Mid-day Meals Programme is in the nature of a supplementary feeding programme for school children to make good the deficiencies in their home diets. An important component of the School Health Programme, therefore, should be the Mid-day Meal Programme. The educational aspect of the School Meal Programme should not be lost sight of if the benefits under the scheme should be consolidated in future years of the school child. This may be achieved by—

(*a*) making them familiar with foods to which they are not accustomed but which are of high nutritive value.

(*b*) inculcating in children proper habits of hygiene in handling utensils, prepared food and in eating. The children learn these easily by doing at a period in their life when they are receptive and forming lifetime food habits. Based on nutrition serveys, it has been estimated that $\frac{1}{3}$ of the total calorie requirement should be met by the School Lunch Programme.

It is important to ensure that strict hygienic precautions are observed in the matter of preparation and distribution of meals

to children in schools. Certain minimum standards must be maintained. These include —

(*a*) Provision of safe water-supply in adequate quantity. Children must get into the habit of cleaning their hands and mouth before and after eating.

(*b*) sanitary environment for the preparation of meals.

(*c*) proper arrangements for the storage, and distribution of prepared food.

(*d*) adequate space for the feeding of children.

(*e*) adequate hand washing facilities for food-handlers and pupils.

(*f*) proper steps for disposal of garbage.

The Medical Officer, by virtue of his professional training and status, should act as the consultant to the school authorities and the Panchayat Union Council in regard to the School Meals Programme. He has to inform himself fully about this programme in his area and the method of operation. He should take an active role in ensuring the use of locally available foods of good quality to supplement deficiencies in the present diets of children.

If, in spite of the advice given by Medical Officer and his Public Health staff there is no perceptible improvement in the environmental sanitation of the school the Medical Officer will send a report to the Panchayat Union Commissioner and the Education authorities through the District Health Officer. The District Health Officer can then pursue the matter further at higher levels.

Health Education and School Health Services.—During the health examination of School pupils by the Medical Officer (assisted by the Health Visitor and Health Inspector) in the 'intensive' area, every effort should be made by the Medical Officer to associate the parents and teachers of classes in this phase. This presents a fine opportunity for the Medical Officer and his staff to educate the parents and teachers about the clinical conditions detected in particular children, their cause, prevention and treatment (nutritional deficiencies, Scabies, Leprosy, Eye conditions, etc.). The teacher can also be taught during these sessions how to detect departures from normal and report such pupils to the Health Visitor, Health Inspector or the Medical Officer.

Teachers who have been educated about the common health problems among school children may themselves be given an

opportunity to share this with other teachers in a meeting. The Zonal Conference of teachers may be utilised for developing good Health Education Programmes in schools through school teachers.

The findings of the school health examination can be brought to the attention of parent in a parents' meeting where the village leaders may be invited so that these groups will get information on how to prevent some of the most prevalent nutritional deficiencies or communicable diseases affecting school children in that area. The interest and co-operation of the parents and village leaders in the follow up after the initial health examination will be invaluable for the scheme.

As a further step simple visual aids can be prepared on the findings of the school health examination for the instruction of the community. These can be prepared easily by the Primary Health Centre staff with technical guidance from the Health Education Bureau, Madras. Such visual aids may, with advantage be used by the Panchayat Union staff, Gramsevaks, etc., with a short training.

I. MODEL INSTRUCTIONS FOR MEDICAL OFFICERS UNDER THE SCHOOL HEALTH PROGRAMME

1. The Medical Officer shall watch over the state of health of the pupils and over school hygiene and sanitation. Further the Medical Officer shall, as far as possible, try to give the teachers, parents, and children, a greater understanding of health problems.

2. The Medical Officer shall examine the children for the first time on entry into the Primary School not later than six months after the commencement of the school year in the "intensive" area. The head of the school will be responsible for furnishing the Medical Officer with information concerning the number of pupils who have been admitted into the Primary School.

3. Health appraisal of the children shall take place during the School hours. Parents should be asked to attend wherever possible. The Medical Officer will arrange for the examination of children in consultation with the head of the school as regards the date and hour of inspection and also arrange for the teachers who should be present during the examination.

4. The Medical Officer shall examine all children, newly entering the school and the results of the examination will be entered on a Model Health Card designed for the purpose.

5. In addition to this initial health inspection, the Medical Officer shall also carry out more frequent examinations in the case of children, whose state of physical or mental health call for special supervision, as well as those children placed under observation. These examinations shall be conducted in the Special School Health Clinics, in the Primary Health Centre.

6. The Health Cards shall be kept at the School. Only the Medical Officer, the Health Inspector, the Health Visitor and the Head of the School shall have access to this card. If the child changes the school, the card shall be sent to the new school where the child has been transferred. The Medical Officer shall be concerned with medical care proper and with preventive vaccinations conducted through the Health Inspector or the Health Visitor.

If the medical examination shows that a child is in need of medical treatment of a more detailed nature, the Medical Officer shall refer the child to higher medical institutions in the District.

7. The Medical Officer shall organise one session in the school for the presentation of his findings with demonstration to the teachers of the school.

8. The following aspects of rchool hygiene shall be subject to the supervision of the Medical Officer :—

Ventilation, Lighting, Sanitary installations, Drinking Water facilities, Dining facilities under the Mid-day Meals Programme, etc.

Any defects noticed in the environmental sanitation of the school shall be brought to the notice of the Education Department and the Panchayat Union Council. The Medical Officer shall submit a quarterly return to the District Health Officer about the progress of the School Health Programme in the Block concerned. He will also keep the Educational Department Authorities informed by a copy marked to them.

II. MODEL INSTRUCTIONS FOR THE HEALTH VISITORS UNDER THE SCHOOL HEALTH PROGRAMME

1. The Health Visitor shall be the closest collaborator of the Medical Officer under this Scheme. Under the direction of the Medical Officer, she shall take part in all preventive and curative activities among the pupils.

2. The Health Visitor shall make all necessary preparations for the examination session of the Medical Officer in the School concerned and shall assist him in this work. She shall fix, with

the head of the school and the teaching staff, the hour of the Medical examination both for collective and for individual examinations.

3. The Health Visitor shall be responsible for the proper maintenance of the School Health Card in the schools concerned.

4. Not later than a month after the commencement of the school year, she shall receive for the use of the Medical Officer, a list of the new entrants into the Primary Schcol. In agreement with the Medical Officer and head of the schools, the Health Visitor shall visit families where the state of health of the school child or for other reasons, make such a visit necessary. She shall observe during these visits, whether the advice of the Medical Officer is being followed. Generally speaking, the Health Visitor shall also make an attempt to improve hygiene in the home and aid the families in this task. The aim of the visits should be to establish contact between the Medical Officer in the school and the home, so as to make the health supervision of the children as effective as possible. Observations made during these visits shall be entered on the Health Card and the teacher informed of it if necessary.

5. She will also be responsible under the directions of the Medical Officer for the treatment of minor ailments in the school.

6. She will carry out any other duties in connection with the School Health Programme that may be entrusted to her by the Medical Officer.

III. MODEL INSTRUCTIONS FOR THE HEALTH INSPECTOR UNDER THE SCHOOL HEALTH PROGRAMME

1. The Health Inspector will work in closest co-operation with the Medical Officer under this scheme.

2. He will be responsible for the supervision of the environmental sanitation of the school and suggest improvements wherever necessary.

3. He will assist the Medical Officer during the examination sessions in the school.

4. He will assist the Medical Officer in the maintenance of the School Health Card.

5. He will make regular visits to the schools in the intensive area and supervise the Mid-day Meals Programme, paying particular attention to (*a*) the storage of articles used in the preparation of mid-day meals, (*b*) the water supply that is in use under

the Programme, (c) the washing facilities that are available for the children before and after the mid-day meals session, (d) the cleanliness of the vessels used in the preparation of mid-day meals and (e) the personal cleanliness of the food handlers employed under the Scheme.

6. He will advise the School Authorities on ventillation, sanitary installations, lighting, drinking water facilities and cleanliness of the environment in the school, etc., and whenever defects are noticed, he should report the matter to the Panchayat Union Council through the Medical Officer, Primary Health Centre.

7. He will be responsible for immunisation programme among school children.

CHAPTER VIII

CONTROL OF COMMUNICABLE DISEASES.

Tuberculosis

Tuberculosis bids fair to be become the most important National Public Health problem after Malaria is eradicated in this country. The indices that are generally used for defining the Tuberculosis situation in a country are—

(i) Infection rate.

(ii) Morbidity rate.

(iii) Mortality rate.

Infection rate.—Extensive Tuberculin surveys carried out over the whole country have shown that the risk of infection by Tubercle Bacilli is ever present and widespread in the community. For an average urban community in the Madras State, infection rates according to age group are as follows :—

upto 6 years.	6 to 14 years.	14 to 24 years.	25 years. and above.
15	45	60	80
PER CENT.	PER CENT.	PER CENT.	PER CENT.

This clearly brings out the risk to children of infection with Tubercle Bacilli in their most vulnerable period of life. Also it points to the fact that the " Reservoir of Infection " is very large in this country.

Morbidity Rate.—Surveys carried out by the Indian Council of Medical Research (1955–58) have shown that the prevalence of tuberculosis in this country is of the order of 2 per cent. The findings of this National Sample Surveyare summarised below:—

In cities and towns and accessible villages, 1·9 to 3·6 millions cases.

In inaccessible villages 1·7 to 3·2 millions.

The total unmber of cases of pulmonary Tuberculosis in the whole country will therefore, be on a lower estimate of 3·6 millions, and on a higher estimate of 6·8 millions.

Of these about one-third will be bacteriologically positive on testing a single sample of sputum.

Mortality Rate.—The rates are not precisely known though one-fifth of the morbidity rate may be accepted as mortality rate in this country.

Role of Primary Health Centres in the Tuberculosis Control Programme.—A national plan for the control of tuberculosis has been worked out which envisages the setting up of District Tuberculosis Control Centres based on District Tuberculosis clinics in the headquarters town of the district where specialist services for diagnosis, X-Ray Treatment, B.C.G. vaccination, etc., will be established. The staff of the District Tuberculosis Control Centre will consist of the following :—

One District Tuberculosis Officer-(trained at the National Tuberculosis Institute also).

One Medical Officer.

Two Treatment Organizers (Health Visitors or Health Inspectors (Seniorone trained at National Tuberculosis Institute.)

One X-Ray Technician (trained at National Tuberculosis Institute.)

One Laboratory Technician.

One Statistical Assistant.

Two Clerks.

Two Drivers.

One Laboratory Attendant.

Two Class IV employees.

B.C.G. team consisting of—

One Team Leader (trained at National Tuberculosis Institute.)

Six Technicians.

One Reserve Technician.

One Class IV employee.

The emphasis in the District Tuberculosis Control Scheme will be on the community aspects of tuberculosis rather than on the medical care of the individual patient as in the past. Thus, the approach is shifted from the purely clinical to the public health. Here the specialist staff is reduced to the minimum while utilizing all the Public Health personnel and institutions available in the district to the maximum. The institutions available in a district are: Taluk Headquarters Hospitals, Primary Health Centres (including the sub-centres and other Panchayat Union Council Maternity Centres) and Rural Dispensaries. All these institutions will help to bring the tuberculosis services within the reach of the entire community and also help to develop the general health services.

Load of cases in a block (of about 80,000 *population).*—On the basis of 1 per cent prevalence in rural areas the case load will be 800 of which one-third will be " open " cases of Tuberculosis. So the Primary Health Centre will have to be responsible for rendering *preventive* CARE and TREATMENT eventually to all these cases living in the area of the Primary Health Centre. A proportion of these cases will already be seeking advice and treatment at the Primary Health Centre or in a Rural Dispensary in the area on their own initiative because of symptoms. This may amount to about one-third i.e., about 90 cases.

Case finding (diagnosis).—The Primary Health Centres under the District Tuberculosis Control Scheme will receive a microscope and laboratory facilities for staining specimens of sputum for examination. Sputum smears will be made at the sub-centres, and rural dispensaries, and these will be sent over periodically to the Primary Health Centre for staining and examination by one of the personnel of the Primary Health Centre who is trained by the district centre. In this manner, most of the sputum positive cases would be diagnosed in a continuous manner. This, it is expected, would at least take care of those cases who spontaneously seek treatment at the Primary Health Centres or dispensaries as a result of symptoms. The microscope is inexpensive, practical and can be handled by para-medical and health staff attached to the Primary Health Centres. Follow-up sputum examinations will be done once in three months for all 'open' cases registered at the Primary Health Centre.

Treatment.—The main objective of Tuberculosis Control Programme should be reduction in the number of infectious cases of Tuberculosis. This objective is possible of achievement with modern chemotherapy. By *proper* treatment, it should be possible to render most of the infectious cases, non-infectious and also to prevent non-infectious cases from becoming infectious.

In view of the large number of cases to be dealt with, it is necessary to depend on self administration of drugs. The important implications of such treatment are.—

(a) Ensuring adequate supply of the drugs by the Health Services.

(b) The regular intake of drugs by the patients for the prescribed period.

The supply of drugs on a regular basis to Primary Health Centres will be done by the District Centre and the distribution of drugs to patients is a responsibility of all health personnel and institutions in the Block. As the emphasis is on self administration of drugs for a minimum period of *one year*, effective supervision over the collection of drugs and its intake by the patients regularly will have to be maintained by the health and medical staff in co-operation with other agencies like Block personnel, Gramsevaks, School teachers, etc. Combined therapy with two drugs is the best from the Public Health point of view. The efficiency and success of a TB Control Programme will be measured ultimately by the number of patients who have completed the recommended minimum treatment regimen and not by the number detected.

B.C.G. Vaccination.—B.C.G. Team Leader 1, B.C.G. Technicians 6 is attached. The B.C.G. team is expected to cover intensively the entire District, Block by Block with a view to achieve maximum coverage. Systematic house to house registration is done and the test is given to all under 40 years of age and vaccination is given to those reacting with 8 mm. or less to standard Tuberculin. The B.C.G. Team will also, during the campaign, have the additional function of questioning adults for symptoms suggestive of TB and referring the symtomatics to the nearest Primary Health Centre. The Primary Health Centre staff will render all assistance to the B.C.G. Team when they operate in their area. Complications - real or fancied - when brought to their notice will be attended to by the Medical Officer and his staff.

X-rays.—For those cases which are bacteriologically negative referrals of cases will have to be made either to the District Centre or to the Taluk Headquarters hospital on the days when the mobile X-Ray unit is scheduled for a visit. This will mark the further stage in the development of diagnostic facilities.

Responsibilities of the staff of Primary Health Centre in the Programme

Medical Officer.-As soon as the diagnosis of Tuberculosis is made and a decision on the line of treatment taken, Primary-motivation of the patient in regard to (a) regular self administration

of prescribed drugs (b) need for the methods of prevention of spread of infection to members of the family—must be done by the Medical Officer. He will also periodically make house visits specially to drug-defaulters to bring them back to the clinic, and to 'open cases' to ascertain whether the patient is following the advice given regarding the prevention of disease. He will maintain a register of *all* cases in which names of family contacts and examinations of contacts should also be recorded (Annexure-F.)

Health Visitor—Her responsibilities are.—(i) Advise the patient that he must cover his mouth while coughing, avoid close contact, particularly with children.

(ii) Advice the patient on proper collection and disposal of sputum. A demonstration of how this is done will be very effective in educating the patient and members of the family in an important preventive measure.

(iii) Educate the patient to be regular with the intake of drugs for the prescribed period. She can unobstrusively check what is left of the last supply of drugs.

(iv) Advise the contacts to have B.C.G. Vaccination when the B.C.G. Team arrives in the area.

(v) Prepare sputum smears from symptomatic cases during her visits to villages and sub-centres. Visits to the homes of the patients should be made as a routine by the Health Visitor in order to encourage the patient to be regular in his treatment and also to impress upon the patient to bring the contacts who may develop symptoms for examination.

Health Inspector.—(a) Assist the B.C.G. Team during the planning and operational stages of the campaign in the Block. He will enlis the co-operation the Official and Non-Official agencies for a successful B.C.G. Campaign.

(b) Educate the public about the preventive aspects of TB during his visits to the village.

(c) Check drug defaulters and bring them to the Primary Health Centre for care and advice.

(d) Collect sputum smears from rural dispensaries and sub-centres for processing and examination at the Primary Health centre during his rounds.

Maternity Assistant.—(*a*) Check drug defaulting.

(*b*) Educate the patients living within her jurisdiction on preventive measures, particularly on sputum collection and disposal.

(*c*) *Prepare* sputum smears from symptomatic cases and send them on to the Primary Health Centre for further examination.

Health Education in Tuberculosis

What the community should know—

(i) Tuberculosis is caused by tubercle bacillus.

(ii) Tuberculosis spreads from a person suffering from the disease to another living or working in close contact with him.

(iii) Tuberculosis occurs primarily as a family epidemic or by close prolonged contact and so control starts in the family.

(iv) Children are very susceptible to tuberculosis and that serious complications and even death may occur in children infected with tuberculosis.

(v) Tuberculosis is no respector of age, sex, race, social or economic status.

(vi) Tuberculosis is a chronic disease *without symptoms* in its *early* stages and that vigilance is necessary to detect it.

(vii) The damage caused by tuberculosis can be controlled and even reversed when the disease is found in its early stages.

(viii) Modern treatment at home with effective drugs for the prescribed period can completely cure the patient.

It is not enough if people know certain fact about tuberculosis. We are concerned not with knowledge but with action. So proper motivation of the individual and through him, the community is necessary if desirable action should result from knowledge. Therefore the approach to Health Education in tuberculosis is to help the individual understand the problem of tuberculosis in relationship to himself, his family and his community and to encourage him to take voluntary action to conquer the disease.

Health education of the patient.—The education of patient is best done by *all* the staff of the Primary Health Centre at the Primary Health Centre and in the home of the patient. Education of the family as a support for the education of the patient is of fundamental importance.

The disease must be explained to him by the Medical Officer soon after the diagnosis is made. He must be sufficiently impressed with the need to follow treatment at home and to obtain *regularly* his supplies of drugs from the Primary Health Centre at stated intervals of time. Sufficient emphasis must be placed on the need for taking the prescribed drugs for a *continuous* period of one year *at least*. The proper disposal of sputum must be explained and demonstrated. This patient education is best supplemented by—

(1) organising a referral mechanism by Medical Officer to Health Visitor at the Primary Health Centre itself, who will

reinforce the teachable points, if necessary, using a few simple visual aids.

(2) organising patient groups on clinic days and teachiug them about prevention of tuberculosis and the value of regular treatment, etc.

The importance of regular examination, not only of the patient but also of contacts (specially children under 15 years who show symptoms of tuberculosis) or who are high grade reactors to Tuberculin (18 mm plus) must be stressed. The efficacy and safety of BCG Vaccination among child contacts must be stressed. Even with all these instructions and training, it may be imposible for the patient to carry out these instruction unless he has the help of his family. The above tasks are best done by the Medical Officer and Health Visitor and Health Inspector.

The staff of the Primary Health Centre must realise that imparting information and facts concerning the disease is a part of the function of each one of them in the Primary Health Centre.

LEPROSY

Leprosy is one of the most important public health problems facing this country and particularly Madras State. Madras State is highly endemic for leprosy. The prevalence rate for leprosy in Madras State ranges from 1 per cent to 8 per cent. The Districts of North Arcot, Chingleput, South Arcot and Salem have the highest prevalence (i.e.), more than 3 per cent. Tiruchirappalli, Madurai, Ramanathapuram and Thanjavur districts have moderate prevalence of leprosy (1 per cent to 2 per cent). The other districts of the State have low prevalence of leprosy.

Leprosy Control Programme is based on—

(*a*) Mass treatment through rural dispensaries, Primary Health Centres and specialised Leprosy Control Services. This is expected to take the treatment to the large number of villages effectively.

(*b*) Case detection through surveys.

(*c*) Health Education of the community and the cases of leprosy.

(*d*) Rehabilitation of the disabled patients so as to fit them into society as self employed and self respecting members. This is yet to be developed on a wide enough scale commensurate with the problem.

A list of special leprosy units working in this State both Government and Voluntary is appended. As the problem of leprosy is a stupendous one all Medical Officers and paramedical and Health staff will be required to supplement the work of

specialised units—Government and Voluntary. The Primary Health Centres in the Blocks will be expected to play an increasingly important role in the Leprosy Control Programme particularly in the field of treatment, case finding among family contacts and school children and *health education*.

Role of Primary Health Centres in Leprosy Control

The objective in leprosy control is, as in the case of any communicable disease, to render an infectious case non-infectious in as short a time as possible. With the advent of Sulphones, this goal has become a reality though the treatment has to be prolonged owing to the chronic nature of the disease process. So all cases in the area have to be registered with the Primary Health Centre and regularly treated with Sulphones with a view to reducing the reservoir of infection. A separate register of all cases of leprosy in the area will be maintained by the Medical Officer which should include names of all contacts under 15 years of age and the examinations made at the periodical follow-ups with the results. Regularity in treatment is prerequisite for clinical cure. Treatment will be on a domiciliary basis with self administration of drugs by the patients. The patient may be issued with tablets to last for 2 weeks at every scheduled visit. The follow up of these cases weekly or fortnightly should be ensured to keep a watch on progress achieved by the patient under the treatment regime and for complications if any.

Case finding.—In the initial stages'case finding may be restricted to vulnerable groups like family contacts of lepromatous cases, school children etc., and then extended to cover other groups in the population. In adition to this, follow-up of household contact of a recognised case is an essential part of the leprosy campaign. The Health Inspector, Health Visitor and Maternity Assistant can all play a very useful role in a case finding programme particularly among pre-school and school groups in the community. Special attention should be paid to the protection of child contacts of infectious leprosy cases. They must be kept under observation periodically so that at the first sign of a skin, lesion developing in them, prompt treatment may be given which offers very good prospects of cure.

Health Education in Leprosy

In view of the ageold prejudice and stigma attached to the disease Health Education of the community becomes important. Also Health Education of patients is important. The following salient facts need to be stressed in Health Education of the public.—

(1) Leprosy is not hereditary.

(2) Leprosy is not venereal in origin.

(3) Seventy-five per cent of leprosy ceases are not infective to others.

(4) Infective power of leprosy is low (compared to TB for instance).

(5) Leprosy is curable.

(6) Leprosy is preventible.

(7) If children can be saved from getting infected, leprosy will die out in course of time. So the slogan may be "Save the children".

With the patient, the following have to be stressed :—

(1) The patient must consult a doctor when there is suspicion of leprosy because of patch in the skin or loss of sensation of touch, pain or heat.

(2) After the diagnosis is made, he must register for treatment.

(3) He must not mix with children.

(4) He must take precautions to avoid injuries to hands and feet. This is the best way to prevent later development of deformities, which reduce his ability to earn his livelihood.

Responsibilities of the staff of Primary Health Centre

Medical Officer.—He will arrange for conducting leprosy clinics in endemic areas on specific days in the Primary Health Centre, and Sub-Centres. If this means duplication of the work of a control unit already functioning in the area, he should restrict his clinic days to such of those cases that find it difficult to reach the treatment centres established by the control units. This will supplement the work of the control unit.

He will maintain a family register of cases and their contacts with details of the results of clinical examination.

He will conduct, as part of the School Health Inspection Programme, leprosy survey among school children and bring the children under treatment.

He will be responsible for Primary motivation of the patient in regard to regular treatment and preventive measures to be adopted on the lines indicated under "Health Education of Patient".

He will render wholehearted co-operation to the leprosy control units functioning in the area of Primary Health Centre.—both for the purposes of diagnosis and for the management of the treatment in the best interest of the patient.

He will have a leprosy map of the area prepared, showing the prevalence of infection according to localities.

The doctor can occasionally meet community groups, to give information, point out the treatment defaulter problems and get community support for leprosy control.

Health Visitor.—She will assist the Medical Officer in the examination of school children, specially girls.

She will follow up the infected school child to the home and examine the female members of the house-hold for any sign of leprosy.

During the pre natal and mothers and infant's clinics at the main and sub-centres, she will pay special attention to the detection of cases amont this group and bring them to the Medical Officer's attention for advice and treatment. She will do health education on leprosy in the homes and in schools. She will check on the regularity of treatment in female cases registered at the Primary Health Centre.

She can meet Women groups and help them to understand the problem and preventive measures in leprosy.

Health Inspector:—He will assist the Medical Officer in the examination of school children.

He will conduct surveys in the villages where leprosy is prevalent and bring the cases to the notice of the Medical Officer.

He will follow up contacts of registered leprosy cases in order to spot early any signs of leprosy particularly among children under 15 years.

He will check drug defaulters and bring them to the clinic for treatment.

He will conduct health education in Schools, Panchayats, etc., in the community on the lines indicated above under "Health Education of Community".

He will prepare a leprosy map of the area showing the prevalence by localities.

He will assist the Medical Officer on clinic days in regard to treatment.

Maternity Assistant.—During their home visits they must be on the look out for leprosy cases among women and children and bring such cases to Medical Officer at the Primary Health Centre or to the sub-centres. They will do Health Education among mothers about leprosy.

They will check on the regularity of treatment among women patients registered at the Primary Health Centre in their jurisdiction of the sub-centre.

INSTITUTIONS NOW WORKING IN THE STATE

Government.—There are 14 Control Units now working in the State, distributed throughout the State, except in Nilgiris district. There are even three units in certain endemic districts as seen rom the list below :—

District. (1)	*Number of units.* (2)		*Place, where situated.* (3)
1 Chingleput ..	1	Government Leprosy Subsidiary Centre.	Tiruvellore.
2 North Arcot ..	2	Do. ..	Tiruvettipuram.
		Do. ..	Tiruvannamalai.
3 South Arcot ..	3	Government Leprosy Treatment and Study Centre.	Tirukoilur.
		Government Leprosy Subsidiary Centre.	Vridhachalam.
		Do.	Veeraperumanallur.
4 Tiruchirapalli ..	1	Do.	Perambalur.
5 Thanjavur ..	1	Do.	Orathanad.
6 Tirunelveli ..	1	Do.	Paramankurichy.
7 Kanyakumari ..	1	Do.	Thuckalay.
8 Coimbatore ..	1	Do.	Kodumudi.
9 Madurai ..	1	Do.	Sembatti.
10 Salem	1	Do.	Attur.
11 Ramanathapuram	1	Do.	Aruppukottai.

In addition to the above units, five more bigger units have already been sanctioned and are now being organized at the following places :—

Chingleput	Kancheepuram.
South Arcot	Kallakurichi.
North Arcot	Elathur.
Madurai	Palani.
Salem	Namakkal.

In addition, the following Voluntary Organisations are engaged in Control Work in the State :—

1 Chingleput ..

1. Belgian Leprosy Centre, Polambakkam.
2. Deenabandu Medical Mission, R. K. Pet.
3. Hind Kusht Nivaran Sangh, Kanchipuram.
4. Church of South India Leprosy Centre, Madrapakkam.

2	North Arcot ..	1. German Leprosy Centre, Chetput.
		2. C. S. I. Leprosy Centre, Wandiwash.
		3. The Swedish Mission Hospital, Gudiyatham.
3	South Arcot ..	1. Thakkar Baba Kushta Nivaran Sangh, Tirukoilur.
		2. Kasturba Gandhi Kushta Nivaran Nilayam, Mozhavanthangal.
		3. Jothy Nilayam Rural Centre, Muttathur.
		4. St. Anthony's Centre, Rawthakuppam.
4	Thanjavur ..	1. Hind Kusht Nivaran Sangh, Kumbakonam.
		2. Sacred Heart Leprosy Hospital, Sakkottai.
5	Salem	1. St. Mary's Hospital, Arisipalayam, Salem.
		2. Leprosy Relief Rural Centre, Settipatty.
6	Tiruchirappalli ..	1. Hind Kusht Nivaran Sangh, Tiruchirappalli.
7	Tirunelveli ..	1. St. Joseph's Leprosy Home, Tuticorin.
8	Ramanathapuram.	1. Dayapuram Hospital and Home for Lepers, Manamadurai.
		2. S. P. G. Mission Hospital, Kilanjunai.

Besides the above, there is the Wallajah Scheme at Ranipet covering the entire Wallajahpet taluk in North Arcot district.

DIPHTHERIA—TETANUS—WHOOPING—COUGH

Organisation of a Mass D.T.P. Programme in the 'Intensive Public Health' Area

The exact prevalence of these diseases in the rural areas is not known with any degree of accuracy. But villagers are very familiar with the signs and symptoms of whooping cough,

particularly about the distressing symptoms caused by this disease in the child. Perhaps they may not be aware of the high mortality this disease causes among children under 2 years and the complications like bronchopuenmonia arising from this condition. Also they may not be aware that a simple and effective preventive inoculation is available against this disease. With whooping cough as the starting point a mass D.T.P. programme can be organised in the " Intensive Public Health area ". A good deal of advance preparation is necessary to secure the active participation and co-operation of the community, if this mass campaign is to succeed. The following preliminary steps have to be taken —

1. Discuss with the leaders in the 'selected village' about the programme to be launched and furnish all facts concerning the value of this preventive measure for the children and the community. Invite questions and, answer these frankly stressing the inocuous nature of the inoculations and the need for three doses at monthly intervals.

2. Form a Health Committee at the village level who will be responsible for this programme. A free and frank discussion of the programme should be held by the Medical Officer with the Health Committee.

3. The Health Committee will be entrusted with the responsibility for preparing a list of all children between infancy and 3 years (2,000 children in the 'Intensive' area—8 per cent of the population) in the first instance, residing in the *selected* village.

4. The Health Visitor and Maternity Assistant will contact the families with eligible children and explain to the mothers the benefits of the scheme laying particular emphasis on the absence three of complications worth mentioning and the need to complete inoculations. Also mothers must be reassured that regular followup of the inoculated children beginning from the 2nd day of inoculation will be made by the staff and any minor complications will be attended to promptly by the Medical Officer and his staff. After the above steps have been finalised in the selected village, firm dates may be fixed for the inauguration of the scheme and arrangements completed for the selection of centres for giving the inoculation in the *selected village itself*. This is considered to be the best arrangement from the point of view of the mothers and the success of the campaign in the village. The Medical Officer and the Health Visitor can complete the inoculations on the appointed day as per the list already prepared by the members of the Health Committee. *During the progress of the inoculation work*, the mothers must be educated about the need for completing the three doses. The Health Visitor will revisit the village on the 2nd and 3rd day and record complications, if any, and treat these cases under the directions of the Medical Officer. It is best to reassure the family about the inocuous nature of the complications.

The objective in the above scheme should be to complete three doses for 90 per cent of the children initially registered by the Health Committee. After completing the work in the selected village, the campaign can cover other villages similarly in the 'Intensive Public Health Area'. Once the programme gets under way, there may be requests from mothers attending the O.P. clinic or Pre-natal clinics at the main or sub centres for D.T.P. immunisation. Such cases are likely to be few and arrangements may be made to complete the doses at the Centre itself.

Great stress should be laid on the educational aspects and the mobilisation of community leaders for the success of the scheme.

SMALLPOX

Smallpox still constitutes a public health problem of some magnitude in the country and in this State. The mortality rate during epidemic times still lies in the region of about 50 per cent and the disease leaves its ravages on the body of those who survive. The epidemic in this State occurs periodically once in about five to seven years. During the inter-epidemic period, stray cases of Smallpox continue to occur in the State, in different areas.

Control of Smallpox.—Traditionally Vaccination has formed the main plank in the control programme. Owing to limitation of staff for vaccination, particularly in rural areas (where 80 per cent of population reside) lack of communications and ignorance of the population, it has not been possible to give complete protection to the vulnerable groups in the community on as large as scale as would be desirable or necessary. During epidemic times, special staff have been appointed for controlling the epidemic. Inspite of these measures smallpox still constitutes an important public health problem. Nearly two thirds of the total smallpox cases reported in the world are accounted for by India and Pakistan—this inspite of a very simple and effective preventive measure being available, i.e.—Vaccination.

In view of the above, based on the recommendations of the Expert Committee on Smallpox appointed by the Government of India, the programme for the eradication of Smallpox in this country has been launched. In the State of Madras, this programme has come into operation from 1st March 1963 and will be continued for two years. The principle on which the Smallpox Eradication Scheme rests is that if in the whole country herd immunity could be produced in the population to the extent of 85 per cent and maintained at that level by repeated Primary vaccinations and Revaccinations over a period of 5 years, then Smallpox, even if it is introduced from outside, would not be able to gain a foot hold in the community and thus die out.

Maintenance phase.—At the end of the Eradication phase of the Campaign it is expected that about 20 to 25 per cent of the population in the areas already covered would have been omitted by the staff for various reasons like (*a*) Sickness, (*b*) Temporarily absent, (*c*) failures of Primary vaccinations, (*d*) refusals and (*e*) under age (below 6 months).

Further, many children would have been born during the period of the eradication programme who would not have been covered. The above categories of unvaccinated persons will have to be given priority in the maintenance phase following eradication phase. It will be the duty of the Health Inspector of the Primary Health Centre and the Health Assistant (or Health Assistants) working in the Panchayat Union Councils to draw up a programme of work in such a manner that all these categories would be immunised *during the year following the end of the eradication phase of the programme*. During the second, third and fourth year after the end of the eradication programme, the maintenance phase will consist of vaccination the children born every year plus one fourth of the population of the block every year.

Role of the Medical Officer in a Smallpox Epidemic

During epidemic times as soon as the Medical Officer comes to know about the occurrence of Smallpox cases within his jurisdiction he will *atonce* proceed to the village with the Health Inspector and the Health Assistant of the Panchayat Union Council and study the situation at first hand. He will pay particular attention to the investigation of the source of the epidemic in the village. If there is any evidence that the particular case has been imported from another area he should take action immediately to inform the health authorities of the area from which the case had been imported into his jurisdiction. He should also inform the District Health Officer about the same immediately. He should arrange for the vaccination of the entire community living in close proximity to the infected locality and then proceed to cover other localities in the village. The coverage should be systematically done in relation to carefully prepared family registers. The Health Inspector and the Health Assistant will be in charge of the vaccination programme in the particular infected village. If several villages are infected, then the Medical Officer should address the District Health Officer for posting of additional staff required for vaccination. He should educate the public about the need for getting themselves vaccinated and also the need for some kind of isolation in the village or within the homes of these cases. If facilities are available for isolation this should always be attempted. If palliative treatment is necessary the same will be rendered by the Medical Officer. The Health Inspector and the Health Assistant will be in charge of the vaccination work in a systematic manner proceeding from the

infected locality to the uninfected locality till all or nearly 90 per cent of the population have been protected by vaccination.

Role of Primary Health Centre in Smallpox Eradication Programme

Medical Officer.—The Medical Officer of the Primary Health Centre will keep himself conversant with the activities connected with the Smallpox Eradication Programme within his jurisdiction. As the Health Inspector of the Primary Health Centre has also been entrusted with the responsibility for planning the programme in his area and for verification of vaccinated cases along with the Health Inspector (Smallpox Eradication Programme) (100 per cent of Primary vaccinations and atleast 50 per cent of re-vaccinations), the Medical Officer will supervise the work of the Health Inspector and Health Assistants occasionally. During his visits to villages he will supervise the work of the Health Assistants in charge of vaccination and also of the Health Inspector who is in charge of verification of vaccinated cases. He will pay special attention to the techniques of vaccination adopted by the Vaccinators, the manner in which the sterilisation of the instruments is carried out, the conditions under which the freeze dried vaccine is being stored and reconstituted in the field, etc. He should take the opportunity to educate the public with regard to importance of vaccination against Smallpox. In the Out-Patient clinics at the main centre and in the sub-centres he will educate the assembled patients on the importance of vaccination against Smallpox.

Health Inspector.—The Health Inspector, Primary Health Centre, will be responsible for planning the work of the Eradication Team when they function within his jurisdiction. He will be responsible along with Health Inspector, [Smallpox Eradication Programme] for supervising and verifying the vaccinated cases (100 per cent of Primary Vaccinations and atleast 50 per cent of Revaccinations). Any slackness on the part of the Health assistants in their work on in their technique will be brought to the attention of the District Health Officer by the Health Inspector *through* the Primary Health Centre Medical Officer. He will keep the Medical Officer informed periodically of the progress of vaccination work in the area. If any resistance on the part of the public comes to his notice and the work has suffered because of it, he will secure the assistance of the Medical Officer to convince the public about the value of Smallpox vaccination.

Maintenance phase.—It is wrong to think that once eradication phase of the programme is completed, there is no need to concern oneself with Smallpox vaccination in the area. This impression must be dispelled for all times. The 25 per cent of the population who would have escaped vaccination during the

Eradication Phase, also those unsuccessfully vaccinated during the Eradication Phase and the children that are born during and after the Eradication Phase have all to be accounted for by vaccination if the objective of Smallpox Eradication is to be achieved. It will be the duty of the Medical Officer to plan with the Health Inspector and Health Assistant, a programme of work covering this 25 per cent of population by Primary and re-vaccinations during the 12 months following the end of the Eradication Programme. About 100 Primary vaccinations and 1,000 Re-vaccinations may have to be carried out monthly to achieve the aim set out above. In a Primary Health Centre area this work will have to be carried on systematically by the Health Assistant under the direction of the Health Inspector of the Primary Health Centre. The Medical Officer will occasionally check the work of the Health Assistant and the Health Inspector in the maintenance phase of the Smallpox Eradication Programme. It is expected that some additional vaccinators may be posted to each Panchayat Union Council during the maintenance phase of the programme. Then the quota of Primary vaccinations and re-vaccinations for each vaccinator may be proportionately allotted keeping in view the principles set out above. The Medical Officer will also verify a small percentage of cases, particularly primary vaccination, done by the Health Assistants in his area.

The Health Inspector will be responsible for—

(*a*) Planning a programme of vaccination for the vaccinators posted to the Block.

(*b*) Verification of the vaccinated cases (100 per cent primary vaccination and 50 per cent revaccinations within his area),

(*c*) Indenting for the required quantities of lymph.

(*d*) Preparation and submission of returns and reports due to the District Health Officer. These may be sent through Primary Health Centre Medical Officer.

(*e*) Preparation of maps and charts showing the progress of Smallpox Eradication and maintenance programmes in the Primary Health Centre area for the Inspecting Officers.

(*f*) Conduct 25 primary vaccinations every month.

(*g*) He will check the family registers maintained by Health Assistants for completeness and accuracy of entries.

The Medical Officer and the Primary Health Centre staff should take it as a reproach to them, if even a single indigenous case of Smallpox occurs within their jurisdiction. The success of Vaccina-

tion Campaign during the maintenance phase will be judged by the absence of even a single secondary case of Smallpox in the area, even if a case should be imported from outside.

CHOLERA

(Including Diarrhoea, Dysentery and Typhoid)

Cholera occurs in this State in epidemic form occasionally and generally involves the deltaic districts of Thanjavur, Tiruchirappalli, Tirunelveli and also Salem and South Arcot. The trend of the epidemic as studied over the years in this State is definitely towards a decline but this should not lead to any complacency on the part of the health staff functioning in the districts. With the provision of Rural Water Supplies and the long range policy of improving sanitation on priority basis during the Five-Year Plans it is expected that Cholera and water borne diseases will be relegated to a position of minor importance in the coming years.

The District Health Officer is statutorily vested with administrative powers for organising control measure within his jurisdiction in the district mobilising all resources in men and material to combat the epidemic. He will be in over all charge of control operations whenever an epidemic out-break occurs. He will co-ordinate his efforts with all the institutions in the district, both Government and local authority, for the effective prevention and control of the epidemic.

The essential measures to be carried out when Cholera is threatened or prevalent are—

(*a*) Notification.

(*b*) Isolation and treatment.

(*c*) Concurrent and terminal disinfection.

(*d*) Immunisation.

(*e*) Maintenance of high standard of sanitation to prevent fly breeding.

(*f*) Health Education.

Notification.—The Village Munsiff within whose jurisdiction Cholera occurs is made responsible for notifying to the District Health Officer and the Revenue Authorities about the occurrence of the epidemic. The Primary Health Centre being situated in a rural area, should be able to get promptly the information about occurrence of the epidemic in any village within its jurisdiction within 24 hours time. Besides the Village Munsiffs, the Primary Health Centre should have arrangements with the Gramsevaks working in the Block for the notification promptly of any suspected case of Cholera in the villages allotted to them. This could be

achieved by contacting the Panchayat Union Council Commissioner and requesting him to issue instructions to Gramsevaks on the lines suggested above.

Isolation and treatment.—Wherever feasible, attempt should be made by the Medical Officer and the health staff to isolate cases of Cholera either in the village itself or in the Primary Health Centre in temporary isolation sheds put up cheaply for this purpose. The Panchayat Union Council under the Madras Panchayats Act is statutorily responsible for the provision of facilities for isolation and treatment of cases of Cholera. The Medical Officer of the Primary Health Centre can take the assistance of the Health Inspector and the Health Assistant of the block to undertake treatment measures like Saline infusion, etc. Many Health Inspectors have undergone a two weeks training in the District Headquarters Hospitals as part of the training of personnel during the present emergency. The Medical Officer on receipt of a report of a case of Cholera within his jurisdiction will *immediately* proceed to the infected village and organise all preventive measures in collaboration with the health staff permanently working in the area and those who are specially posted by the District Health Officer for epidemic duties. He will maintain close contact with Panchayat Union Council authorities who are responsible for providing all facilities towards the control of epidemic. If more villages are affected he should seek the assistance of the District Health Officer for the mobilisation of staff from the neighbouring blocks and post them for duty in the affected unit. The District Health Officer will also provide sufficient stocks of Cholera Vaccine, disinfectants and drugs for use within the affected Primary Health Centre area through the Panchayat Union Council. The occurrence of Cholera in Primary Health Centre area should be treated as an emergency and should receive top priority consideration from the Medical Officer and his staff. *If necessary the Medical Officer may even interrupt his routine out-patient duty to rush to a village threatened by epidemic and initiate control measures on the spot.*

Disinfection.—The Health Inspector will be responsible for the concurrent and terminal disinfection in the infected village in the homes or cases. For the cases isolated in the hospital, it is the responsibility of the Medical Officer with the assistance of his staff to arrange for disinfection.

Chlorination of drinking water supplies like ponds, wells should be done systematically, daily till the infection subsides completely in the village. The Panchayat Union Council will provide disinfection Mazdoors for the above purpose. Whenever possible responsible intelligent people should be taught the proper methods of disinfection and chlorination of water supplies, so that they can taken over these duties when the health staff have to move out to attend to other infected villages.

Inoculation.—Preventive inoculations must be carried out energetically in all the infected villages. A target of 70 to 75 per cent of inoculations should be carried out in the villages affected and also in the areas adjoining the infected villages.

The Medical Officer, the Health Inspecter, the Health Assistant (sometimes the Health Visitors in the case of gosha population) should all take part in this programme and a target of 300 inoculations per day for each of the paramedical staff should be fixed. Time permitting the Medical Officer may also undertake inoculations in the infected village. This will have a decided psychological advantage in pushing through the preventive measures.

Sanitation.—A high standard of sanitation must be maintained in all infected villages as this is a sure prevention against fly breeding. Special sanitary mazdoors may have to be posted for the work by the Panchayat Union Council for the duration of the epidemic. It will be the duty of the Public Health staff to supervise the work of these mazdoors and see that sanitation is maintained at a very high level in the affected villages.

Health Education.—Intensive education of the people must be carried out in the villages on the following aspects of Cholera prevention :—

(i) Use of boiled water for drinking purposes.

(ii) Prompt notification of cases of Cholera.

(iii) Help in isolation and treatment.

(iv) Prompt disinfection.

(v) Need for inoculation of all the people in the villages.

(vi) Avoidance of unripe, over ripe fruits; exposure of foods to fly and keeping the premises clean to minimise the chances of fly breeding.

Women groups and teachers may be used as channels to communicate information to the people.

Epidemic Reports and periodical Returns.—These should be forwarded by the Medical Officer to the District Health Officer for onward transmission to the Director of Public Health. No delay must occur in the transmission of reports and returns.

Scabies

Scabies is an important communicable disease treated at the Primary Health Centres, causing a good deal of inconvenience and suffering. Poor personal hygiene, ignorance about causation and prevention are some of the important factors which maintain

the infection in the community. The availability of a simple and effective treatment has not helped to rid the community of this disease owing mainly to the lack of a sustained educational programme along with treatment.

The following steps in the control programme are considered to be effective:—

(i) With a Scabies 'case' as the starting point, an educational programme can be built round it in the daily Out Patient Clinics itself or in the AnteNatal Clinic or Mother's classes. In simple terms, the cause, mode of spread, treatment and prevention may be explained. The aid of a flash card can be a valuable adjunct to the explanations. The Health Visitor and Health Inspector can help the Medical Officer in this part of the programme.

(ii) This should be followed up in the homes of cases and in the community by demonstration of—

(*a*) Paring of nails.

(*b*) How to apply the medicine.

(*c*) Bathing.

(*d*) Disinfestation of *all* clothing of *all* the members of the affected family.

(*e*) Disinfestation of infected premises.

Here, group education is used to motivate the community to take action voluntarily towards eradication of a communicable disease. The Health Committee of the concerned village should be given the responsibility for the mass campaign against Scabies.

(iii) During School Health Examinations, a very good opportunity presents itself to the Medical Officer, Health Visitor and Health Inspector to survey the prevalence of scabies among school children and to initiate a programme of action to control the disease based on the educational approach. The teacher and the parents should be involved in this programme as it is futile to rid the child of the disease while keeping the source of infection at home untouched. The teacher will be made responsible for reporting further cases of scabies that arise after the mass treatment and disinfestation programme is completed. Thus the infection will be brought under control and ultimately eradicated among this group.

Plague

Plague is a minor Public Health problem occurring in a very restricted areas of the State, bordering Mysore State. Though Plague has been practically non-existent in the State for many

years, now and then sporadic cases are reported from areas bordering Mysore State in the past two years. The following areas have been reporting Plague infection sporadically :—

Salem district.—Hosur, Harur and Krishnagiri taluks.

Coimbatore district.—Thalavadi firka in Satyamangalam sub-taluk.

Though Nilgiris district borders on Mysore there has been no report of plague in this district, for the past ten years.

Control measures.—Special Units have been sanctioned for Plague control and are working in the above areas. The special scheme relies mainly upon (1) Cyanogas Fumigation of Rat burrows in houses in the endemic areas to destroy rats and

(2) spraying withBHC wettable powder to destroy fleas. In view of the resistance which the fleas have developed to DDT, change over to BHC has been made.

Special staff employed in the endemic districts

Salem district.—30 Units are working.

Each Unit in Salem district consists of one Plague Maistry and three Mazdoors. Hosur taluk is divided into seven divisions each in charge of a Health Inspector.

Coimbatore district.—One Health Inspector and three Units.

Nilgiris district.—Five Health Inspectors, one Plague overseer and 20 Units.

Finance.—The entire expenditure on plague control measures is in the first instance met by the State Government and finally 50 per cent on the staff and chemicals (excluding vaccine) is recovered from the respective Panchayat Union Councils concerned.

In view of the fact that special staff are conducting Anti-Plague operations in a systematic manner in these areas the role of the Primary Health Centre in the control of Plague is confined to—

(i) Prompt treatment of Plague cases occurring within the area of Primary Health Centre. Adequate stocks of Streptomycine and Sulphadiazine will be made available to the Primary Health Centre for undertaking treatment of Plague cases.

(ii) Anti-Plague inoculations to be conducted in the infected villages along with the special staff working in the area.

The Medical Officer, Primary Health Centre, assisted by the health staff will undertake the treatment of Plague cases in

the infected village. Plague control measures will take precedence over routine out-patient work in the face of an epidemic.

The Medical Officer will keep a separate register showing incidence of Plague cases in his area week by week. During his visits to Sub-Centres or other villages within the Primary Health Centre area he will also supervise the actual anti-plague measures being carried on by the Special staff.

CHAPTER IX

ENVIRONMENTAL SANITATION

Problem before us

Poor environmental sanitation is a problem both in urban and rural areas.

Regarding village sanitation, the Environmental Hygiene Committee has this to report, " There is hardly any sanitation in the villages where 85 per cent of our population lives. The village houses do offer some protection to dwellers against sun and rain, but they have no latrines, no protected water-supply and no public cleansing." The river is used for all purposes and is polluted. The soil is polluted.

The net result is reflected in the nation's health. Water and other filth borne diseases claim 500 lakhs of people annually and kill 20 lakhs of people. Every year about 120 infants out of 1,000 live births die before they complete their first year. Infants, more than any other section depend to a large extent on the environmental conditions for their survival. The incidence of hookworm varies between 40 per cent and 70 per cent of the population. Cholera is endemic in many parts of the country and epidemic outbreaks are not infrequent. A good percentage of the out-patients in any primary Health Centre or dispensary is for treatment of Dysenteries and Diarroheas.

Priorities in solution

While the factors in the environment to be controlled are many; we have to think in terms of priority of attention, as the country's present resources will not permit an outlay on all the items of work, however desirable they be.

The third report of the Expert Committee on Environmental Sanitation, appointed by the World Health Organisation has dealt with this particular problem of assigning priorities in rural environmental sanitation work. The Committee recommends three basic steps towards the provision of a safe environment in rural areas and small countries by action to—

(a) provide adequate supplies of safe drinking water;

(b) provide for the safe disposal of human excreta and

(c) control the insect and animal vectors of disease, in areas when they are of significant importance.

The Committee also reports that wherever possible, action should be directed against other causes of diseases, but where it is necessary to allocate priorities in health programmes, the three fold attack recommended above, should be pressed with all the vigour and resources available.

Duties of Primary Health Centre Staff in Environmental Sanitation

Provision of adequate supplies of safe drinking water

The objectives of any water-supply system are.—

(a) to supply safe and wholesome water to the users, whether these constitute a family, or a community,

(b) to supply water in adequate quantity and,

(c) to make water readily available to the users, in order to encourage personal and household hygiene.

Safe and wholesomewater has been defined as,

(i) uncontaminated and hence unable to infect the user with a water borne disease,

(ii) free from poisonous substances and,

(iii) free from excessive amount of minerals and organic matter.

The source of water-supply for most of our villages are,

(1) open draw wells,

(2) village ponds and,

(3) rivers and irrigation channels. There are chances, under the existing village situations, for the water-supplies to get contaminated at the source itself.

Most of the rural population depend upon common sources for their drinking water-supply requirements. A survey carried out in 32 villages in Madurai district reveal that about 94 per cent of the village population take water for drinking and other household requirements from dispersed common sources, while 6 per cent of the village households alone have their own wells. This should be

true, for other areas in Madras State. The gravity of the situation lies in the fact that a good percentage of the community in a village is exposed to risk of infection, when a common water source gets contaminated.

In a Panchayat Union area, the Primary Health Centre has very little responsibility in the construction of wells for drinking water purposes. Based on a request made by the local Panchayat, the Panchayat Union approves the scheme and the Union Engineer prepares an estimate and executes the scheme, based on type designs, after getting necessary sanctions. The Health Inspector of the Primary Health Centre, is consulted regarding the site selection for the well and issue of potability certificate.

Even though the Primary Health Centre staff has no direct responsibility in the construction of new wells, it is still their duty to see that all drinking water wells within their area are kept in a sanitary condition, so that there is no risk of contamination of the water-supply. The risk of contamination of a closed well fitted with one or two hand pumps is remote and the health staff, should in all their contacts with village situations, impress on the Panchayats the need to cover wells and fit them with hand pumps. While this is our ultimate objective, the immediate duty of a Health Inspector in a Primary Health Centre should include—

(1) Systematic sanitary surveys of all drinking water sources in the jurisdiction of the Primary Health Centre in the "Intensive" area initially.

(2) Where a well is found to be defective in the sense that there is no protective platform or parapet or the staining wall is cracked or there are no facilities for disposal of waste water, etc., he should bring this fact to the notice of the local Panchayat and Panchayat Union concerned and also meet the Junior Engineer to get an estimate prepared for rectifying the defects.

(3) Since the local Panchayat itself will be in a position to carry out repairs costing Rs. 300 or below, he should meet the President of the Panchayat and get the work executed.

(4) In case of major repairs or where the local Panchayat does not have the financial resources, the concerned Panchayat should be approached to ask the Panchayat Union for funds.

(5) In all cases of complaints by the local population on the potability of drinking water, the Health Inspector should collect samples and send it to the King Institute for analysis.

(6) Wherever stepwells are the sources of water-supply, whether it be in an area infected with guineaworm or not, the Health Inspector should move the local Panchayat to get the step-wells converted into draw wells.

(7) In the case of river or canal supplies, the Health Inspector should motivate the population to have alternate new sources of water by construction of new wells.

(8) Whenever the Health Inspector finds that the villagers do not have adequate number of sources of drinking water-supply, he should move the local body to construct new wells.

(9) The Health Inspector should also survey the private sources of drinking water-supply used by the public or a portion of the community and get remedial measures undertaken, whenever the well is found to be defective.

(10) Water taken from protected sources gets recontaminated during the process of transportation, storage and distribution in the house and the risk for health continues. Hence, ideally protected drinking water is to be made readily available within the house, all the 24 hours. As it may take many more years before we can attain this objective, the health staff, during the period, should concentrate on educating the rural population in the proper method of storing of drinking water. Villagers are to be educated to the advantages of taking boiled and cooled water, properly stored, for drinking purposes.

(11) Many of the villages are now having ground level or overhead distributing tanks for water-supply. These tanks should be got cleaned atleast once in six months under the personal supervision of the Health Inspector and the well and the tank chlorinated.

(12) *Chlorination.*—Routine chlorination of all drinking water sources at regular intervals in a Primary Health Centre area is neither feasible nor necessary. Adequate chlorination will kill all pathogenic organisms present but in our village situation, where individual buckets and ropes are used, there is the risk of re-introduction of contaminated material at any time. Hence periodic chlorination of water supplies, say once in two weeks or a month will not really be worth the efforts or time or money spent on it. On the other hand, the expenditure incurred in covering the wells and fitting the same with hand pumps, will give a better out-turn for the money spent by way of reduction in sickness. However chlorination of drinking water sources should be done during the following occasions :—

(*a*) Before a newly constructed well is put into use.

(*b*) After completion of repairs for any of the existing wells.

(*c*) At time of epidemics. This will relate to wells not only in infected villages but also in villages where there is a threat of outbreak.

(*d*) In all suspected cases of contamination of water sources.

(*e*) During fairs and festivals.

(*f*) One round of chlorination of all wells, soon after the onset of monsoon.

The Health Inspector, Primary Health Centre could easily train a teacher or Gramsevak to do the chlorination wherever required.

(13) *Collection and despatch of water samples for analysis.*—One of the duties of the Primary Health Centre is to collect water samples and despatch the same to the King Institute for analysis. The Panchayat Unions are, in an increasing measure, constructing overhead tanks and supplying water through taps. This is an improvement over the draw well system. In all cases, before an overhead tank is constructed, the water should be got tested and certified. It is advisable to get samples of water collected from all newly constructed wells and sources where there are complaints of potability and analysed at the King Institute. Detailed instructions on collection and despatch of water samples are available from the circulars issued by the King Institute, Guindy.

Safe Disposal of Human Excreta

Objectives.—Faecal borne infections and infestations are the cause of tremendous losses in death and debility. These diseases are controllable through good sanitation especially sanitary excreta disposal.

Latrine use among village people.—That most of the villagers do not use latrines is borne out by the various surveys conducted throughout the country. Roughly, not more than 2 per cent of the village population do possess or use latrines. The remaining people use river banks, tank bunds, open fields, back yard of houses, street drains or approach roads to villages for defaecation. This leads to the natural contamination of soil, water and food resulting in the occurrence of large number of cases of diarroheas, dysenteries, typhoid, cholera, hookworm, round worm, etc.

Solution to be aimed at.—The solution to the problem involves motivating the rural population towards acceptance, construction and use of sanitary latrines. There are many types of latrines recommended for use in rural areas and the health workers are, in general, familiar with these types. It is also generelly agreed that the latrine or other disposal methods recommended should satisfy the following requirements :—

(1) There should be no contamination of soil, surface and ground water.

(2) Excreta should not be accessible to flies and animals.

(3) There should be no handling of fresh excreta, or if indispensible, it should be kept to a minimum.

(4) It should not produce smell or unsightly conditions and public or private nuisance.

(5) The method should be simple, cheap in consutruction and easy of operation.

Public Latrines.—The question of construction of public latrines in rural areas has been discussed very often. The Environmental Hygiene Committee in their report, on the subject has this

to say—" In rural areas, the aim should be to promote latrines in each house and not public latrines. The latter are not so effective. Collective responsibility often degenerates into irresponsibility; the standard of cleanliness is lower and has to be propped up by a paid sweeper. Public latrines are often badly located. Where water for ablution is not provided, people prefer to go to tank or river than use a pulic latrine ".

Latrine promotion in rural areas.—The emphasis, laid in this Manual, is on the organisational and educational aspects of rural latrine programme, than on the constructional aspects. Many designs or suitable types of latrines for rural areas have been developed and tested. But the major difficulty has been in motivating the rural population towards acceptance and use of these devices.

Continued efforts over a period of time will be required to make a substantial percentage (say 25 per cent) of the households in any village construct and use latrines. The health staff working on the programme will therefore have to pay regular visits to the villages taken up for the programme over a period of months. The working of a latrine programme requires a different stategy than the one to be adopted for a programme like vaccination. It will be advisable for the health staff to chose a few villages in the " Intensive " area and concentrate in these, till he is able to achieve a reasonable coverage. This, however, does not mean that he should not meet sporadic demands for latrines from other villages, as and when they arise. In any village may be found a few households who are ready to accept latrines. While these few people could be identified and approached in all villages, the concentrated attention of achieving a coverage can be initially limited to a few selected villages. The following guidelines will be of help to the Primary Health Centre staff in organising the latrine programme:—

(1) *Choose the design of the type of latrine to be recommended.*—The points to be considered while choosing the design are (1) cost, (2) acceptability by the public, (3) easy maintenance, (4) soil particulars of the area to decide whether the latrine pit requires lining or not.

(2) *Sanitary survey of village.*—Information relating to the following factors like (1) Number of existing latrines with types, (2) Use of existing latrines, (3) defaecation habits, (4) local materials available for construction, (5) houses with space for latrines, (6) seasons when construction work can be undertaken, etc., are to be gathered. In town Panchayats or semi-urban villages where there are different types of latrines other than flushout, those latrines may be converted into flushout by contacting such of those owners.

(3) *Preparation of entire staff.*—The entire Primary Health Centre staff should be familiar with the programme. They should

be trained in educational methods. It should be remembered that even a Maternity Assistant or Health Visitor, while making home visits in the selected villages for maternity work could make use of their relationship with women, to make them accept latrines.

(4) *Preparation of other block staff.*—Especially in a latrine programme, support of other rural technical workers should be fully developed. Many voices talking about sanitation are better than one. Attempts should therefore be made to involve other workers like Gram Sevaks, Social Education Organisers, Compost Development Inspector, etc., in the programmes. This can be done through short orientation sessions arranged at block staff meetings. The Health Inspector should create a cordial atmosphere, by establishing personal contacts.

(5) *Selection of villages for work.*—The following criteria will be useful in selecting the villages for intensive work:—

(i) Good leadership, (ii) better economic status, (iii) high literacy, (iv) water is not a felt need, (v) response to other block programme, (vi) easy accessibility.

(6) *Work the Programme through Leaders' Groups.*—The leaders are the custodians of the traditional ways of thinking and behaviour of the people. More than anyoneelse, they can be counted upon to interpret new changes as some thing important for the people to accept. As such it is better to identify the local leaders and work the programme through these leaders' groups. A group approach will also help in generating a social acceptance for the programme in the village and make further work easier.

(7) *Health Education in the Village.*—Health educational activities are essential throughout the latrine programme. The health education work should take into consideration the existing knowledge, beliefs and customs of the people. The following educational methods and contents of the programme have been found to work successfully:—

Educational methods.	*Contents of the programme.*
1 Direct Discussion ..	1 Learn what a latrine is
2 Latrine demonstration..	2 Latrine can be clean, odourless and cheap.
3 Group discussion ..	3 Latrine is desirable for a house.
4 Use of visual aids like flash cards, films-trips, etc.	4 Latrine to be associated with factors that people value, like— (*a*) Protection of health. (*b*) Convenience. (*c*) Privacy. (*d*) Prestige. (*e*) Fertilizer value of night soil.

Educational methods.	*Contents of the programme.*
5 Example setting by workers.	5 Site selection and construction.
6 When construction goes on in one house, call others to see it and discuss.	....

(8) *Identify the interested group of people, and work with them first.*—Interest in latrines is generally higher among males, literate persons, persons in higher income groups, village leaders, etc., and it is important to work first with the village people having the greatest interest. The first few constructions may be used to provide a satisfactory 'Image' or idea of a sanitary latrine to other people.

(9) *Use and maintenance.*—This is very important. Visit every constructed latrine to ensure its proper use and maintenanance. Show people how to flush, how to clean, etc. If clogging occurs, help them to remove it. It is better to construct few latrines and see that they are properly used and maintained than to construct large numbers and neglect the follow-though needed to ensure good maintenance.

CONTROL OF THE INSECT VECTORS OF DISEASE

(*i*) *Fly Control*

The only realistic method of fly control is the elimination of breeding places.—Flies lay eggs in any decomposing organic matter in refuse, stable manure, open latrines, cowdung, etc. Attention to basic sanitation is the first and foremost method to be adopted.

The staff of the Primary Health Centre could help in elimination of breeding places for flies in 3 or 4 different ways—

(*a*) *Construction of latrines.*—A well organised latrine construction programme in villages is a sure way to eliminate breeding places.

(*b*) *Composting.*—Another way by which the Health Inspector of the Primary Health Centre can contribute to elimination of breeding places is by attention to the promotion of the community manure pit programme. Every Panchayat Union has a Compost Development Inspector. His main function is to organise community manure yards in each and every village or hamlet. Proper composting of refuse and other organic wastes like cattle-dung can help both in production of the much needed fertilizer for agriculture and also elimination of breeding places for flies.

Panchayats with a population of over 2,000 are also eligible for an initial compost loan which could be utilised for purchase of lands, equipments and appointment of sweepers and those with a population between 1,000–2,000 are eligible for free grant for compost manufacture. The Health Inspector, should therefore work in close collaboration with the Compost Development Inspector in this programme. While selecting the site for community manure pits, care may be taken to distribute the areas in different sectors of the village, so that the distance for which the refuse has to be carried by individual families will be minimised. The present practice of indiscriminate dumping of refuse along street margins and corners and back yards of houses could thus be eliminated.

(c) *Organisation of Sanitation Campaign.*—The organisation of frequent sanitation campaigns in village will also help to reduce fly breeding. The campaign envisages cleaning every house and the compounds attached to them on a specified morning by the house-owner. The local Panchayat is to engage one or two sweepers on that day to clean up the public places. The whole sweepings are to be removed to the compost pits. The village leaders are to be requested to go house to house, along with the Health Inspector to explain to the people the significance of the programme and elicit their active participation.

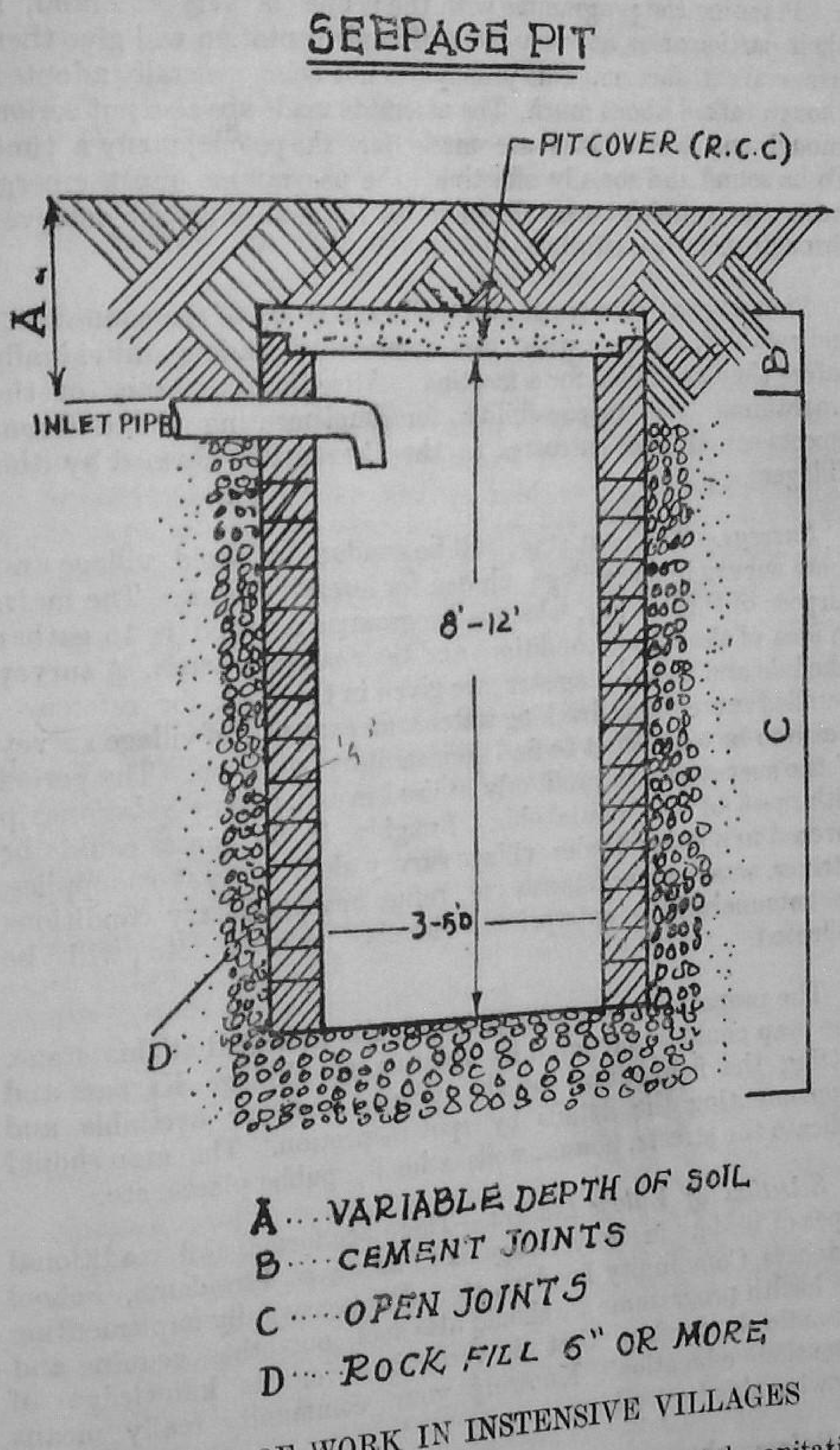
(*ii*) *Mosquitoe Control.*

Culex mosquitoes generally breed in stagnant waters containing a little organic pollution. The liquid wastes from individual dwellings in villages consisting of wash water generally from bathrooms, kitchen, etc. stagnate either on the road margin or back yards and provide the breeding places for Culex mosquitoes. The disposal of this liquid waste in such a way as to prevent stagnation is a sure way to eliminate the breeding places for filaria carrying mosquitoes.

Soakage pits.—Soakage pits can be had where the land is not sufficient for kitchen garden and where the sub-soil conditions favour quick disposal. Soakage pits will not function in rocky soils or clayey soils. These are not suitable in places where the water table is 2'—3' below ground level. The minimum size of a soakage pit is to be 3' square and 3' deep. A frequent trouble with the soak pits is that the space between the stones in the top layers get clogged up due to the silt coming along with waste water and also the surrounding earth getting inside. This can be prevented by providing a silt trap and also forming an earthern bund around.

Seepage pit.—Another problem that the Health Inspector will come across in some of the villages is where street fountains have been erected for supply of drinking water. It is a common sight to find waste water stagnating near the fountains as the disposal arrangements are not generally provided for. The disposal of the waste water under the circumstances, should be the responsibility of the Panchayat.

Seepage pits of diameter 3–5 feet taken to a depth of 8–12 feet below ground level are suitable for such cases. The sketch given will show the particulars of construction :



METHOD OF WORK IN INSTENSIVE VILLAGES

As has been already stated intensive environmental sanitation activity in any village will require concentrated efforts spread over a period of time. This will naturally limit the area for such work

to a few villages. Selection of responsive village, in the initial stages has many advantages and the criteria for judging the responsiveness has also been outlined in an earlier paragraph.

Planning the programme with the people is very essential, as their participation at every stage of implementation will give them personal satisfaction. This principle is not being generally adopted, though talked about much. The attempts made are also not serious enough and hence plans are made for the people, many a time. To be sound and socially effective, the programme must emerge from the people's own decision to act and must be achieved through their own efforts.

Planning with the people will call for a study of the community and establish contacts with the community leaders individually before they are called for a meeting. After the acceptance of the programme, the responsibility for implementing the different aspects can also be entrusted to the Committees formed by the Villagers.

Surveys.—The next stage will be conduct a rapid village and house survey in the village chosen for intensive work. The main purpose of this survey, which is programme oriented is to gather an idea of the village conditions and their sanitary needs. A survey schedule and village register are given in this book for reference. Detailed survey of all drinking water sources as part of village survey is also to be carried out to find their sanitary condition. The period of the survey can be profitably utilised in building up relationship with most of the households. Roughly 50–60 houses could be covered in a day. Under village survey, data on water supplies, latrines, waste water stagnation, refuse heaps, sanitary conditions or remunerative enterprises, hotels, schools, etc., will be collected.

The preparation of a village map is also indicated at this stage. The map could be prepared by meeting the Village Karnam and getting the field outline of the village wherever available and supplementing the details by spot inspection. The map should indicate the streets, houses, wells, schools, public places, etc.

Selection of Village Leaders.—There are formal and traditional types of leaders in every village like Panchayat Presidents, School Teachers, Community Leaders, etc. For successfully implementing the health programme we should also spot out other genuine and dynamic leadership that is recognised for its knowledge of extension education. Knowing your community really means knowing this leadership.

Before choosing the leaders, it will be useful to have a knowledge about the different communities present in the village, their representation and cone of influence, economic and social

standing and influence with other groups and recognised leaders in each group. This information could be gathered by meeting the School Teacher, Panchayat President or Village Munsif and cross checking the information gathered for accuracy of data. A graphical representation of this data, which is called a sociogram, will thus give us a general picture of the village.

The spotting out of leaders other than the formal ones is to be done by contacting individually a few known leaders representing each community. The objectives of collecting the information is to be explained to them and they may be requested to suggest names of persons in their communities whom they think could best serve in a Health Committee, taking into consideration factors like age, literacy, aptitude for social work, influence, availability in village, ability to talk freely with people, etc. They are also to be told that the names suggested will be kept confidential. The persons suggested by these leaders are again to be contacted individually and similar information gathered from each. Finally a table is to be prepared showing the names of persons suggested and the number of times each name have been suggested by different persons. A comparison will give the names of most acceptable leaders.

Formation of Health Committee.—Each of the leader so chosen is next to be contacted individually and they are to be told that their names have been suggested by the people of the village and their acceptance, to serve in the Health Committee is sought for. A general meeting is then to be held where the leaders as well as other important people of the village are invited to attend. At this meeting the purpose, scope and function of the Health Committee is to be explained. To make sure that the committee is fairly representative, the assembled leaders are asked a few question like

(1) Do you think that any of the important leaders have been left out and is to be included?

(2) Does this Committee represent all streets, communities? etc.

Such questions will help in bringing out names of influential persons who might have been left out. Once the leaders agree to form the committee, the President and Secretary are elected. The date of the next meeting of the Health Committee is also fixed at this stage itself.

Working with the Health Committee.—During the first meeting of the Committee after its formation, the leaders should be asked to talk about the existing conditions and health needs of the village as they see them. By this time the worker is also familiar with the sanitation needs of the village, as gathered from the survey. During the discussions the group should be

guided to identify the problems correctly, assign priorities and seek solutions. They may also be appraised of possible types of health programmes that could be undertaken and the help they can expect from the Primary Health Centre. Once the decision to work on a programme is taken the responsibility for implementation should be fixed and the leaders given necessary support and guidance in implementing the decision.

Programmes to be undertaken.—Once the committee is formed. it is not necessary to limit the scope of discussion and action to environmental sanitation programmes alone. In many cases it will be more rewarding to work on a total health programme for the village. In our own experience, there have been many instances where the first programme undertaken in the village was a mass scabies treatment, as this was recognised as the immediate health need by the people. Some of the programmes that could be undertaken for solution with the help of the Health Committee are (1) Mass treatment for scabies, (2) Construction of soakage pits, (3) Improvements to drinking water sources, (4) Construction of household latrines, (5) Provision of community manure yards, (6) Organisation of Sanitation Campaign, (7) D.T.P. Immunisation for children, (8) Provision of latrines and urinals to schools, (9) Vaccination, (10) Family Planning, (11) Hygienic kitchens for Schools, (12) Smokeless kitchens in houses, etc.

It is also possible that the leaders might request our help and guidance in meeting some of their felt needs, not related to health, Under such circumstances the health staff should help the leaders in establishing contacts with those persons, who could satisfy their felt need.

Methods and Media.—The health staff will have to use different types of techniques and methods and materials in this work. The worker has to arouse the interest of the people in the programme and motivate them to act. This motivation has to be done through suitable extension methods supplemented by educational tools. The Educational methods will include (1) Individual and Group discussion, (2) Demonstration, (3) Training Camps, (4) Home Visits, (5) Exhibitions, etc., while filmstrips, flash cards, leaflets, models,charts, etc., could be used as educational tools.

Follow-up.—The Health Committee should be helped to meet periodically, review progress and plan for the future. A record of all such meetings will be useful. The health staff should attend these meetings and guide the Committees. The staff and the leaders should be very conscious of their responsibilities in executing the decisions taken at Health Committee meetings. The health staff, apart from their own share of work, help and guide the leaders in fulfilling their part of the work. The discussions at Health Committee meetings should be made real and objective.

ANNEXURE – A.

NOTIFICATION OF BIRTH

ORIGINAL

Serial No. Maternity Record Card No.

Village : Taluk :

District :

Date of Birth : Male / Female

Address :

Born Alive / Dead

Father's Name :

Age :

Mother's Name :

Age :

Name of the Maternity Asst./ Dai who conducted the delivery :

Place

Date : *Signature.*

NOTIFICATION OF BIRTH

DUPLICATE

Serial No. Maternity Record Card No.

Village : Taluk :

District :

Date of Birth : Male / Female

Address :

Born Alive / Dead

Father's Name :

Age :

Mother's Name :

Age :

Name of the Maternity Asst./Dai who conducted the delivery :

Place :

Date : *Signature.*

NOTIFICATION OF BIRTH

TRIPLICATE

Serial No. Maternity Record Card No.

Village : Taluk :

District :

Date of Birth : Male / Female

Address :

Born Alive / Dead

Father's Name :

Age :

Mother's Name :

Age :

Name of the Maternity Asst /Dai who conducted the delivery :

Place :

Date : *Signature.*

Annexure – B.

NOTIFICATION OF DEATH

ORIGINAL

Serial No.

Name of deceased :

Male/Female. Age at death.
Yrs. Ms. Days.

Place of death :

Taluk / District.

Date of death :

Address of deceased :

Cause of death :

Informant's name and address.

Place :

Date : *Signature.*

NOTIFICATION OF DEATH

DUPLICATE

Serial No.

Name of deceased :

Male/Female. Age at death.
Yrs. Ms. Days.

Place of death :

Taluk / District.

Date of death :

Address of deceased :

Cause of death :

Informant's name and address.

Place :

Date : *Signature.*

NOTIFICATION OF DEATH

TRIPLICATE

Serial No.

Name of deceased :

Male/Female. Age at death
Yrs. Ms. Days.

Place of death :

Taluk / District.

Date of death :

Address of deceased :

Cause of death :

Informant's name and address.

Place :

Date : *Signature.*

ANNEXURE C.

MATERNITY AND CHILD WELFARE (MADRAS STATE).

District Board.
Municipality.
Panchayat

MATERNITY RECORD

Date.	of Uterus weeks	F.H.S.	and presentation.	Fit of head	Breasts	Urine	Blood pressure	General Condition, advice given and remarks	Initials of Maternity Assistant, H. V. W.M.O.

(Face to page 76)

Annexure C.

MATERNITY AND CHILD WELFARE (MADRAS STATE).

District Board.
Municipality.
Panchayat

MATERNITY RECORD

Year ——————

Registration No. ——————

Name —————————————— Age ——————

Address ——————————————

Occupation ——————————————

Age at marriage ——————————————

Husband—

Name ——————————————

General health ——————————————

Occupation ——————————————

Family Income ——————————————

House.—Rent per mensem ——————————————

Size and description ——————————————

Number of inmates —

Children—12 years and under ——————————————

Adults over 12 years ——————————————

Home conditions ——————————————

History of previous pregnancies.

	Abortion, premature or full-time.	Still-birth or alive.	Living or dead.	State of health or cause of death.
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Present pregnancy ——————

(1) ANTE-NATAL

Arrangements for confinement :—

Doctor ?

Maternity Assistant ?

Hospital ?

Are conditions satisfactory for confinement at home ?

Pelvic measurements :—

I.S. ——————————————

I.C. ——————————————

Ext., Conj. ——————————————

General Condition ——————————————

Physical signs ——————————————

Symptoms ——————————————

Special or abnormal signs or symptoms ——————————————

Nature of delivery anticipated ——————————————

Advice given ——————————————

ATTENDANCE.

Date.	Height of Uterus weeks	F.H.S.	Position and presentation.	Fit of head	Breasts	Urine	Blood pressure	General Condition, advice given and remarks	Initials of Maternity Assistant, H. V. W.M.O.

(Face to page 76)

(2) INTRA-NATAL

	Date	Hours	Minutes
Lobour—			
Commencement ..			
Rupture of membranes.			
Birth of child ..			
Do. placenta ..			
Total ..			

Nature—

Position—

Presentation—

Membranes and placenta—

Haemorrhage—

Perineum—

Remarks—

(3) POST-NATAL.

(4) CHILD,

MATERNITY AND CHILD WELFARE (MADRAS STATE)

INFANT RECORD

Year ________ Registration No. ________ ________ CENTRE

Date of registration ________ Date of birth ________ ________ District Board / Municipality.

Name ________ Cast ________ Sex ________ Condition when registered. ________

No. of mother's card ________ Her name ________ Vaccinated ________

Father's name, address, occupation, income ________

Relevant remarks only
- 1. Health of mother ________
- 2. History of her pregnancies ________
- 3. Health of other members of the family ________
- 4. Home conditions ________

Dates of visit	Weight	General condition and development	Feeding and diet	Illness and action taken	Remarks

Condition at 12 months old ________ Can walk or stand ________

Number of teeth ________ Weight ________ General condition ________ Remarks ________

MATERNITY AND CHILD WELFARE (MADRAS STATE)

Pre-School Record

Year———— Registration No.————

Centre————

Date of registration———— Date of birth————

———— District Board / Municipality

Name———— Caste———— Sex————

Name————

No. of mother's record————

No. of infancy record————

Condition when registered————

Relevant remarks only.

1. Health of mother————
2. History of her pregnancies————
3. Health of other members of the family————
4. History of infancy————
5. Home conditions————
6. Condition at 12 months old———— Walked at———— Talked————
   Number of teeth———— General condition———— Remarks————

Date of visit	Weight	General condition and development	Diet	Illness and action taken	Remarks

ANNEXURE D.

PARTICULARS OF CONTRACEPTIVE SUPPLIES AND ISSUES

(To be filled up by the Family Planning Field Workers, Health Inspectors/ Health Visitors/Maternity Assistants/Grama Sevaks.)

[Condom/Foam Tablets/Others]

Date of supply.	Balance at hand.	Quantity supplied.	Total.	Quantity issued since the previous supply.	Initials of		Remarks.
					Super-visor.	Leader.	

FAMILY PLANNING EDUCATION PROGRAMMES

(To record a brief note on the educational activities carried out each month

---

Date....................

Date....................

Date....................

ANNEXURE E.

SCHOOL HEALTH CARD

Panchayat Union Council——————
Primary Health Centre——————

Name —————————— Sex ——————————

Address—————————— School —————— Class————

Date of birth :

Family history :

Father's name : Occupation :

Health status

Mother's name : Health status :

Brothers : Health status :

Sister's : Health status :

Special health problems in the family :

Previous illness of child :

Immunisation status :—

		Date.	Result :
Smallpox		..	
Mantoux Test		..	
B.C.G.		..	
Diphtheria, Whooping Cough, Tetanus	I Dose.		
	II Dose.		
	III Dose.		

[Contd.....]

Physical Examination

	I	II	III

Present condition—

1. Date of Inspection :
2. Regularity of attendance:
3. Clothing :
4. Personal cleanliness:
5. Mental alertness :

General—

Height :

Weight :

Chest measurements :

Nutrition :

Condition of skin and scalp :

pecial—

Teeth and Gums :

Nose and Throat—

(*a*) Adenoids :

(*b*) Tonsils :

(*c*) Glands—

Sub-maxillary :

Cervical :

Mouth :

Ear Disease— Hearing. } R :
L :

Eyes—External Disease :

Vision. { R :
L :

Anaemia.

Heart—Organic functional :

Lungs :

Liver :

Spleen :

Hernia :

Hydrocele :

Orthopedic defects :

Speech defects :

[Contd......]

Special problems and recommendations of the Medical Officer :

Remarks of the Teacher on the follow-up of Medical Officer's advice and the progress of the child since last examination :

Annexure F.

COMMUNICABLE DISEASES FOLLOW UP REGISTER

(Indicate the name of patient in red ink and contacts in blue ink below giving serial numbers only for PATIENTS.)

(Indicate for each case details of dates of follow-up and action taken including laboratory and clinical check-ups done—During the follow-up visit the Health Inspector or Health Visitor will confine their attention mainly to referring symptomatics to the M.O., P.H.C., and bringing the treatment defaulters to the PHC for continuing the treatment.)

Sl. No.	Name	Age	Sex	Address	Date of diagnosis and of check-up	Date	Date	Date	Date	Date
I. Patient (Red ink.)						(Details of follow-up)				
Contacts (Blue ink.)										
II. Patient										
Contacts										

QUARTERLY PROGRESS REPORT*

For Quarter Ending.............

Date__________

Primary Health Centre :__________ Panchayat Union Council: __________

No. of villages served : Population served .

ADMINISTRATIVE MATTERS

A. Personnel in position at end of quarter.

I. MAIN CENTRE.

	(Indicate) (Number)	(Indicate) (changes during quarter)
Doctor		
Health Visitors/P. H. Nurses.		
Midwives or Aux. Nurse Midwife.		
Health Inspectors.		
Health Assts.		
Compounders/Pharmacists.		
Others.		
Driver		
Class IV personnel.		

B. PRIMARY HEALTH CENTRE ACCOMMODATION AND FACILITIES :

____

____

____

____

Staff accommodation :

____

____

____

____

____

Indicate improvements in buildings, water-supply, sewage, lighting etc., during quarter.

(a) IN MAIN CENTRE__________

____

____

____

(b) IN SUB-CENTRE__________

____

____

____

____

II. SUB-CENTRES.

Number of Sub-Centres established.

Other associated Sub-Centres (PUC, etc.)....

* To be submitted to the District Health Officer at the end of every quarter.

[Contd......]

389-19—7A

Name of Sub-Centre.	Distance from Main Centre.	Indicate staff position in each Sub-Centre.		Indicate staff in each associated Sub-centre.
		Midwife or Aux. Nurse Midwife.	Other.	
1				
2.				
3.				
4.				

C. Medical Care.

1. Out-patients :

	Males.	Females.	Children under 15 Years old.	Total.
New				
Old				
Total				

2. In-patients (excluding Maternity Cases) :

Number of beds available (excluding maternity beds).	Total number of patients discharged during the quarter :
Total number of patients admitted during the quarter.	Number of patients referred for admission to other hospitals :

3. Laboratory :

Number of tests performed during the quarter (utilise blanks for any additional tests) :

Urine :	Stool :	Blood :	Malaria ;	Sputum :

Others :		Number of specimens sent to referral laboratories :

[Contd......]

D. Maternity and Child Health.

Details of Activities.	Primary Health Centre.		Sub-centres.	
	Institution.	Domiciliary.	Institution.	Domiciliary.
(a) Number of new registrations done :				
(b) Number of Ante-natal visits:				
(c) Number of women who did not attend before delivery but who were delivered in the Centre :				
(d) Total number of post-natal cases seen :				
(e) Number of deliveries conducted :				
(f) Number of deliveries conducted by Trained Dais :	X			
(g) Number of deliveries conducted by untrained persons :	X		X	
(h) Total A.N. Clinics :		X		X
(i) Total Pediatric Clinics :		X		X

Note : X–Columns not applicable to the corresponding items.

E. Family Planning Activities.

Number of vasectomies done :

Number of contraceptives distributed : Condoms : Foam Tablets : Others :

F. Communicable Diseases Control (Including immunizations).

	Smallpox.		Cholera.	Typhoid.	D.T.P. I II III dose.	BCG Vaccination.
	P.V.	R.V.				
Number of immunizations done :						
Attacks :						
Deaths :						

G. Quarterly report on the salient Public Health activities of the Health Inspector

1. *Vital Statistics* :—

Number of Births registered in the 'Intensive P.H.C.' area :
Number of Deaths registered in the 'Intensive P.H.C.' area :
Number of Births detected in the entire area :
Number of Deaths detected in the entire area :
Number of UPC detected in the entire area :
Education session conducted for the V.Ms. :

[Contd......]

2. *Communicable diseases control*—

(*a*) T.B. (Survey and Follow-up).

(*b*) Leprosy (Survey and Follow-up).

(*c*) Other chronic communicable diseases.

[Guineaworm, Dysentery etc. (Survey, follow-up and control measures).]

(*d*) Epidemics—(Details of Incidence, mortality and control measures adopted).

3. *School Health*—

(*a*) Progress Report:

Give details: Number of school children examined:

Number of School children referred to M.O.

(*b*) Environmental sanitation improvements carried out in the school:

(*c*) Number of Schools where Midday Meals Programme was inspected and suggestions made:

4. *Environmental sanitation.*—

(*a*) Number of new latrines put up:

(*b*) Number of latrines under use:

(*c*) Number of soakage pits put up:

(*d*) Number of Manure pits put up:

(*e*) Sweeping compaigns conducted:

H. SKIM MILK DISTRIBUTION DURING QUARTER.

(Stock and Beneficiary Report.)

Centre.	Stock at beginning of Quarter.	Stock received in Quarter.	Stock consumed during Quarter.	Balance on last day Quarter.	Average number fed daily.		No. of feeding days in the Quarter.
					Mothers.	Children.	
Main Centre ..							

I. TRAINING ACTIVITIES.

Number of Dais under training:

Other training activities:

J. ANY SPECIAL PUBLIC HEALTH PROBLEMS ENCOUNTERED IN THE WORKING OF THE PRIMARY HEALTH CENTRE DURING THE QUARTER.

Place: Signature:

Date: Designation:

VILLAGE REGISTER

GUIDANCE FOR THE MAINTENANCE OF THE VILLAGE REGISTERS

1. A Village Register will be maintained separately for every census village and this will be a permanent one. Part I of the register is intended for recording the particulars of the entire census village. In Part II, each set is intended for a hamlet of the census village.

2. The Health Inspector of the Primary Health Centre concerned, will be responsible for the maintenance of the register.

3. The register is intended for recording factual data on the development of the environmental sanitation of the village or hamlet in all its aspects and should not be treated as a routine diary of the public health personnel.

4. All Public Health activities done by the different agencies should be recorded in brief under the appropriate heads.

5. *The existing conditions under different heads at the time of the first survey* of the village or hamlet should be made *in red ink*. Subsequent improvements should be made in black ink.

6. Details of any epidemics, fairs and festivals occurred, special surveys conducted in the village or hamlet should be recorded under "Special Features".

7. If the pages under any heading are used up, additional sheets may be attached to the register.

8. For Major Panchayats, the set intended for a hamlet should be utilised for entering the particulars of a Ward of such Panchayat.

GUIDELINES FOR FILLING UP THE COLUMNS OF THE VILLAGE REGISTER

Guidance for the maintenance of the Village Register is given on the front page of the Register itself.

After going through the same, please also follow the instructions given below for filling up certain columns of the Village Register which are not self-explanatory :

Part I, Abstract—This should be filled up by getting information from local Panchayat, Village Official, by local enquiry and a general survey of the village.

" Health Committee "—Under "Avocation", mention their position in the community set up—Panchayat Member, School Teacher, Village Official, Members of Voluntary Organisations (specify), etc.

" Other particulars (for the Village as a whole) "—Under this, mention any other points of Public Health Interest, e.g., peculiar climatic conditions, agricultural operations involving movement of labour population, perennial pilgrimage centre, etc.

Part II., Map—Under " Duration of Survey " the date of commencement, dates of subsequent visits for survey, and the date of completion should be entered.

Names of important landmarks—Important landmarks are Panchayat Office, Public Health Sub-Centre, School, Temple, Chavadi, Community Hall, Recreation Centre, Co-operative Institutions, Roads, Post Office, etc., Markets and Bus Stands and Compost Yards, if any.

Section 3 (*a*).—Disposal of Sullage—After the village survey write in the details about the existing Public Sullage nuisances.

Section 3 (*b*) (Sullage)—House numbers having sullage nuisance should be entered under dates of inspection. If any soakpit or kitchen garden is renewed, that also should be entered under " Improvements effected "

Section 4 (*a*)—Public Latrines, Defects noticed, if any, either during the first or subsequent inspections should be entered with the corresponding dates.

Section 4 (*b*),—Latrines, Private, Under 'Type' Non-flush-out, others include all the other non-flushout types which do not require scavenging.

Section 6—Refuse disposal, the heading " Method of Disposal including compost ", refers to compost yards, maintained by the Panchayats. The existing number of compost pits and other facilities in the yard at the time of first survey, should be entered.

The improvements effected subsequently should be entered with date. If there is no compost yard, it should be noted in the register as such.

The number of standard size manure pits existing at the time of first survey and the number newly put up with the assistance of the Compost Inspector and the Village Level Worker, should be entered.

Section 7—Educational Institutions—Under " Defects noticed " (2) water-supply, **Note** the water source under use, arrangements for storing and drawing water and chlorination. (3) Sanitation—Details regarding the sanitary conveniences. (4) Feeding Programmes—Provision of smoke-free kitchen, safe water supply, kitchen garden, disposal of kitchen waste and sullage water, should be looked for and entered. (5) Medical Examination--Number of children and teachers examined by the Health Inspector and the number referred to the Medical Officer.

Section 8,—Health Committee should be made to meet at least once a month and follow up action should be taken by the Health Inspector on the decisions which require his help.

Section 9—Under special features, any epidemics occurred special surveys, fairs and festivals, National Health Programmes or National Eradication programmes carried out should be entered. Any other information which is of Public Health importance also may be entered.

PART I.

Abstract.

Name of the Village ______

Name of the Hamlets ______

______ ______

______ ______

______ ______

______ ______

______ ______

______ ______

	1951	1961	1971
Population of the Village			

Name of the Primary Health Centre ______

Name of the Panchayat Union Council ______

Name of the Panchayat ______

Residence of President ______

Village Officer (Birth and Death Registrar).

Health Committee—Date of formation ______

Number of Members ______

Name of members and Avocation:

1. ______
2. ______
3. ______
4. ______
5. ______
6. ______
7. ______
8. ______

Name of members and Avocation:

9. ______
10. ______
11. ______
12. ______
13. ______
14. ______
15. ______
16. ______

Other Particulars (for the village as a whole):

______

______

______

______

PART

Name of the Village:

Name of the Hamlet:

Population:

Dates of first survey:

Religion and Community predominant:

MAP OF THE VILLAGE/HAMLET

(Showing the location of sources of public water supply, public latrines, names of the important landmarks, public buildings and houses.)

NOTE.—Give numbers for Public Water sources and Public latrines and give details for them under headings "Public Water Sources and" "Public Latrines" infra.

Name of the Village:

Name of the Hamlet:

Population:
(contd.)

1. Water supply

(i) Water Sources constructed by public authorities—

Serial number	Date of inspection	Type	Location	Defects noticed [state specifically conditions regarding (1.) construction (2.) potability. (3.) Utility 4. ownership. 5. disposal of waste water]	Improvements effected (with date- including new constructions.)

(ii) Other Private Water Sources used by the public—

Serial number	Date of inspection	Type	Location	Defects noticed [state specifically conditions regarding (1.) Construction (2.) potability (3.) utility (4.) ownership 5. disposal of waste water].	Improvements effected—with date- (including new constructions)

(*a*) Disposal of sullage—Public—

Date of inspection	Location and type of stagnation of sullage	Suggestions for abatement	Improvements effected (with dates)

(*b*) Disposal of sullage—Private—

Date of inspection	Sullage nuisances existing with door numbers	Suggestions for abatement	Improvements effected with dates (include renewals also)

2. Latrines

(*a*) Public Latrines—(Existing conditions)—

Date of inspection	Serial number	Type	Number of seats	Locality or street	Defects noticed

Improvements—

Date	Serial number	Improvements effected (include new constructions also.)

2. LATRINES—*cont.*

(*b*) Private—

Date of inspection		Details	Total number of houses having latrines
Type	Number	Number of seats	Door numbers
Non-Flushout—			
Service:			
Others :			
Flushout—			
Total :			

Number of houses having space for latrines but with no private water supply } Total Number:
Door Numbers.

Number of houses having space for latrines and private water supply } Total Number:

Details of Private Latrines newly constructed—

Serial number	Door number	Date of completion.	Type.	Number of seats.	*Remarks*—State whether it is in use, properly maintained, any defects noticed

3. VILLAGE SANITATION

Date of Sanitation Compaigns conducted	Insanitary places got cleaned. Date.	Number.	Other activities under sanitation

4. Refuse Disposal

Staff working in the village/hamlet:

Conservancy equipment available:

Method of disposal including compost:

Community manure pits :

5. Educational Institutions

(i) *Existing conditions*

Serial number	Date of inspection	Name of the School and Type	Strength: Teachers.	Strength: Pupils.	Defects noticed — 1. Condition of building — 2. Water-supply — 3. Sanitation — 4. Feeding Programmes and 5. Medical Inspection (Number examined, number referred to Medical Officer.)

(ii) *Improvements effected*

Serial number	Date	Details of improvements

6. Health Committee

Date.	Number attended: Members.	Number attended: Non-Members.	Decisions taken	Action taken for follow-up.	Decisions implemented

7. Special Features

(Any Epidemics, Fairs and Festivals, any Special Surveys, etc.).